Atlantic Ocean Basin

The Atlantic Ocean Basin is comprised of a single HUC (02080110) encompassing the eastern half of Virginia's Eastern Shore whose coastal lagoons and barrier islands are largely unaltered by human impact and are considered the best remaining Atlantic coast wilderness. The basin is located within the Conservancy's Chesapeake Bay Lowlands Ecoregion and has significant acreage protected through local, state, federal and private efforts. Conservation targets include nearshore Atlantic marine fauna, coastal estuarine and lagoon systems, the barrier island systems, migratory shorebirds, waterfowl, land birds and raptors, and breeding barrier island and lagoon birds.

The projects discussed in this section serve as mitigation for permitted impacts within the Atlantic Ocean Basin for which the Fund was used as compensatory mitigation. All approved projects through 2009 are listed on the below tables. Complete project descriptions for projects approved prior to 2009 may be found in earlier reports as indicated below. Updates are given for each project as applicable. Complete descriptions of projects approved during 2009 are provided below. While these projects may not be considered typical mitigation for wetland impacts, their role in the improvement of water quality and benefit to fish and wildlife has proven appropriate for funding through the program.

There have been no proposed non-tidal wetland projects in this basin, although 0.62 acres of impacts have accrued in the basin with a mitigation liability of 1.21 credits. To date, the Fund has not been used to mitigate for stream impacts in this basin.

The following table provides a summary of projects for which funds were approved in this basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

Table 1: Approved Project Summary for the Atlantic Ocean Basin

Project ID	Project Name	Purpose of Proposal	Corps Approval Date	Funds Authorized		
				Non-Tidal Wetland Projects ($)	Tidal Wetland Projects ($)	Stream Projects ($)
AO-1	Virginia Coast Reserve (SAV Beds)	M	6/10/2005	0	50,000	0
AO-2	Virginia Coast Reserve (Oyster Beds)	M	6/10/2005	0	156,350	0
AO-3	Virginia Coast Reserve (SAV Beds II)	M	8/5/2008	0	50,000	0
			Totals	**0**	**256,350**	**0**
			Grand Total	**256,350**		

M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey

The following table summarizes the status, proposed mitigation activity type and

associated acreage, and proposed credit for each tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Atlantic Ocean Basin. In addition, the table provides the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted.

Table 2: Tidal Wetland Project Summary for the Atlantic Ocean Basin

Project Information		Tidal Marsh	SAV	Oyster	Tidal	Tidal	Mitigation Acres	Proposed Credits
Project ID	Status	Rest	Rest	Rest	Enh	Pres		
AO-1	M	0.00	10.00	0.00	0.00	0.00	10.00	2.00
AO-2	M	0.00	0.00	3.00	0.00	0.00	3.00	0.60
AO-3	I, M	0.00	10.00	0.00	0.00	0.00	10.00	2.00
Acre Sub-totals		0.00	20.00	3.00	0.00	0.00	23.00	4.60
Credit Sub-totals		0.00	4.00	0.60	0.00	0.00		
Total Acres of Tidal Impacts					**1.01**			
Total Mitigation Liability					**1.01**			
Total Proposed Credits					**4.60**			
***Percent of Wetland Acreage Replacement**					**455.45**			

LP - Pending finalization of land protection	I - Restoration/Enhancement/Creation activities in progress
P - Planning / permitting	M - Mitigation monitoring
D - Pending delineation / assessment	CA - Corrective actions necessary
C - Closed	PC - Pending project closure
*It should be noted that the restoration in this basin is "out of kind" and is credited at a 5:1 ratio	

Project Summaries

The following section provides a detailed summary of each project located within the Atlantic Ocean Basin for which the Corps has authorized funds through 2009. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project.

AO-1 Virginia Coast Reserve (SAV Beds)

Please refer to the 2007 Annual Report for a detailed project description.

The purpose of this project is to restore ten acres of submerged seagrass beds, primarily eelgrass (*Zostera marina*), within the seaside coastal bays of the Eastern Shore.

Monitoring of the establishment and an assessment of seedlings in these plots will be conducted annually until 2011. In the spring 2009, each of the 10 plots was assessed for plant presence by counting plants along two diagonal transects. Plants were found to be well established along each transect in all of the 10 plots signifying initial success of the project. Due to the unique nature of the activities in this project a 5:1 ratio is applied to the crediting of this project.

This restoration and the activities described for AO-3 are a small part of a much larger

effort to restore seagrass beds along the Eastern Shore. Additional information about the full restoration project may be found at http://web.vims.edu/bio/sav/sav08/index.html. From this mapping effort eelgrass now covers almost 3200 acres in 2009. An interactive map site using Google Earth allows various views of the beds from differing levels: http://web.vims.edu/bio/sav/maps.html. Individual plots can be seen in Spider Crab Bay and the increasing cover amount of eelgrass over the last ten years is seen in the associated graphic. South Bay eelgrass beds are the densest.

AO-2 Virginia Coast Reserve (Oyster Beds)
Please refer to the 2007 Annual Report for a detailed project description.

The purpose of this project is to restore four acres of functional oyster reefs in the coastal bays of the Eastern Shore. Monitoring is scheduled for a total of five years, ending in 2009. Annual monitoring reports are submitted to the Corps during the spring of the subsequent year.

The fifth year monitoring event for the site was completed in 2009. Both reefs were monitored for oyster density (per square meter), spat fall and oyster growth, biomass, and total reef acreage.

The VARTF Reef CCN1 at Cobb Island has shown fair to excellent natural recruitment since the reef was constructed. The average density of oysters peaked at 1392/m^2 during March 2006 (9 months post construction) and dropped slightly to 1243/m^2 during October 2006 (16 months post construction). The average density decreased to 688/m^2 November 2007, which is to be expected as the reef matures and the oysters increase in size. Over the past two years the density changed very little, averaging near the November 2007 measurement. The average height (length) of the oysters increased from 23.7 mm in November 2008 to 29.2 mm in February 2010. Market size oysters (> 70 mm height) began appearing in the samples by October 2006, and they continue to be found in similar numbers in this year's samples despite the overall decrease in average shell height.

The VARTF Reef HLCR4 at Hillcrest Farm showed excellent natural recruitment in the first two years post-construction. The average density of oysters increased from 629/m^2 October 2006 (4 months post construction) to 1253/m^2 January 2008 (18 months post construction), indicating excellent spatfall and natural recruitment. The average height increased from 5.3 mm October 2006 to 21.8 mm January 2008, indicating moderate growth. However, our monitoring in October 2008 and November 2009 has shown two consecutive years of decreasing oyster density to just 364/m^2. Surviving oysters are growing, however, with an increase of 7.3 mm in average shell length over the past year.

Both oyster reefs have shown increasing sizes of oysters over time while live oyster densities are stable or falling. The large decrease in density at the HLCR4 reef may partially be a result of poaching as there was little evidence of mortality. TNC will continue to monitor and manage the reefs as part of their Native Oyster Restoration and Adaptive Management Program at the Virginia Coast Reserve.

The total acreage of reefs restored as part of the project is 3.01 acres. The final year of required monitoring was 2009. Due to the unique nature of the activities in this project a 5:1 ratio is applied to the crediting of project. The Conservancy anticipates closing this

project in 2010.

AO-3 Virginia Coast Reserve (SAV Beds II)

The purpose of this project is to restore ten acres of submerged seagrass beds, primarily eelgrass (*Zostera marina*), within the seaside coastal bays of the Eastern Shore. The funding for this project was approved by the Corps on August 5, 2008. This project was sponsored and implemented by the Virginia Institute of Marine Science (VIMS). VIMS proposed to harvest and broadcast a minimum of 100,000 seeds per acre in the fall of 2008 to cover a total of five acres and an additional five acres in 2009. The eelgrass plots are concentrated in the Gull Marsh area, specifically Spider Crab Bay. Monitoring is scheduled to take place for a total of five years, ending in 2013. Annual monitoring reports are submitted to the Corps by the end of January each year.

VIMS has successfully completed the 2009 restoration objectives identified for 2009. In previous years of 2006, 2007 and 2008, VIMS had planted 5 acres of eelgrass using seeds. Tasks in 2009 followed the same protocols as in the past few years: harvest plants for seeds in the spring, holding them in seawater tanks until seed release, sieving tanks to collect the seeds and then holding them until the time of broadcasting. Seeds were broadcast in early Oct. in Spider Crab Bay in 5 one acre plots. This was slight modification of prior years' work when one-half acre plots were seeded. The seed density was increased in 2009 by 50% from 100,000 to 150,000 seeds per acre.

The spring 2009 assessment of a representative number suggests that eelgrass plants are persisting in the plots. Seedling establishment rate for a representative number of plots was 18%, which is average for the coastal bays. Through 2009, over 250 acres have been planted to date with 32 million seeds.

Monitoring of the establishment and an assessment of seedlings in these plots will be conducted annually until 2014. Due to the unique nature of the activities in this project a 5:1 ratio is applied to the crediting of project.

Big Sandy Basin

The Big Sandy Basin is comprised of two HUCs (0507202 and 0507201) that flow northwest out of the Appalachian Mountains of Southwestern Virginia into Kentucky and West Virginia. This basin is within the Conservancy's Cumberland and Southern Ridge and Valley and Central Appalachian Ecoregions.

The Fund has been used to mitigate 0.11 acres of non-tidal wetland impacts and 3,006 linear feet of stream impacts in the Big Sandy Basin. Through 2009, the Conservancy has not requested funds to pursue any mitigation projects in this basin.

Chesapeake Bay Basin

The Chesapeake Bay Basin is comprised of three HUCs (02080101, 02080102, and 02080109) that surround one of the largest and most productive bay ecosystems on the east coast of the United States. The basin is located within the Conservancy's Chesapeake Bay Lowlands Ecoregion and is the focal area of several conservation groups, including the Chesapeake Bay Foundation and the Alliance for the Chesapeake Bay, as well as efforts of federal, state, and local governments. Conservation targets include migratory waterfowl, high-energy beaches, and bayside estuarine systems.

The projects discussed in this section serve as mitigation for permitted impacts within the Chesapeake Bay Basin for which the Fund was used as compensatory mitigation. All approved projects through 2009 are listed on the below tables. Complete project descriptions for projects approved prior to 2009 may be found in earlier reports as indicated below. Updates are given for each project as applicable. Complete descriptions of projects approved during 2009 are provided below.

The following table provides a summary of projects for which funds were approved in the Chesapeake Bay Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

Table 3: Approved Project Summary for the Chesapeake Bay Basin						
Project ID	Project Name	Purpose of Proposal	Corps Approval Date	Funds Authorized		
				Non-Tidal Wetland Projects ($)	Tidal Wetland Projects ($)	Stream Projects ($)
CB-1	Dameron Marsh (Smith 1)	M	10/9/1997	105,752	10,000	0
CB-2	New Point Comfort (Trimmer)	M	1/11/2000	100	1,736	0
			8/28/2008	2,945	0	0
CB-3	Dragon Run (Calhoun 1; Piedmont Farms)	M	2/6/2004	150,000	0	50,000
CB-4	Dragon Run (Byrd)	M	8/5/2004	43,800	0	43,800
CB-5 / CH-12	Eastern Virginia Phragmites Control	M	8/30/2002	0	20,000	0
			9/9/2003	0	20,000	0
			8/31/2004	0	12,666	0
CB-6	Dragon Run (Calhoun 2; Piedmont Farms)	M	2/1/2005	66,588	0	28,538
CB-7	Dragon Run (Calhoun 3; Piedmont Farms)	M	4/25/2005	12,000	0	0
CB-8 / YK-4	Upper Crab Neck (BP North America)	M	4/21/2005	42,500	0	0
			2/22/2007	7,120	0	0
CB-9*	Guinea Neck Site	F	6/1/2006	6,800	0	0
CB-10	East River (Brooks/Ober)	M	10/5/2006	28,496	0	0
			2/22/2007	192,450	0	0
CB-11	Dragon Run (Friends of Dragon Run)	M	12/7/2006	66,300	0	11,700
			6/16/2008	12,114	0	2,138
CB-12	Guillford Shores Site	M	12/7/2006	3,732	9,000	0
CB-13	Dameron Marsh/Hughlett Point/Fleet Bay (Thompson et al)	M	7/27/2007	2,750	2,750	0
			6/16/2008	40,000	0	0
			11/2/2008	313,000	0	0
CB-14*	York Complex (Harris Creek site)	M	8/10/2007	2,500	2,500	0
CB-15	Dragon Run site	M	8/10/2007	122,472	0	0
CB-16	Jacobus Creek (Hampton)	M	9/24/2008	0	9,372	0
CB-17	Dameron Marsh/Hughlett Point/Fleet Bay (Thompson, William)	M	11/2/2008	313,000	0	0
CB-18	Dragon Run site #2	M	3/16/2009	113,297.40	113,297	25,177
CB-19	Dragon Run (Carlson)	A	3/16/2009	5,000.00	0.00	0.00
		M	5/18/2009	479,526.00	0.00	0.00
CB-20	Dragon Run site #3	M	12/21/2009	17700	0.00	0.00
			Totals	**2,149,942**	**201,322**	**161,353**
			Grand Total	**2,512,517**		

*Project is no longer pursued due to landowner constraints or the results of feasibility studies

M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey

Table 4 provides a summary of projects which have closed in the Chesapeake Bay Basin.

Table 4: Closed Project Summary for the Chesapeake Bay Basin

Project ID	Corps Approval Date	Corps Closure Date	Amount Approved ($)	Amount Returned ($)	Amount Unallocated ($)	Wetland Credits	Stream Activity	
							Buffer Preservation (lf)	Livestock Exclusion (lf)
CB-2	1/11/2000 8/28/2008	11/29/2009	4,781.00	0.00	576.00	4.34	N/A	N/A
CB-3	2/6/2004	12/16/2008	200,000.00	143,196.00	577.00	5.95	6,613	N/A
CB-4	8/5/2004	3/16/2009	87,600.00	65,000.00	66,065.84	0.26	2,205	N/A
CB-5/ CH-12	8/30/2002 9/9/2003 8/31/2004	8/14/2007	52,666.25	0.00	9,475.00	1.4	N/A	N/A
CB-6	2/1/2005	12/16/2008	95,126.00	55,677.00	0.00	4.52	1,550	N/A
CB-7	4/25/2005	12/16/2008	12,000.00	3,044.00	0.00	0.36	N/A	N/A
CB-9	6/1/2006	7/27/2007	6,800.00	0.00	0.00	N/A	N/A	N/A
CB-12	12/7/2006	8/5/2008	12,732.00	0.00	12,457.00	N/A	N/A	N/A
CB-13	6/16/2008	12/21/2009	358,500.00	0.00	158,582.93	15.4	N/A	N/A
CB-14	8/10/2007	12/16/2008	5,000.00	0.00	2,500.00	N/A	N/A	N/A
		Totals	**835,205.25**	**266,917.00**	**250,233.77**	**32.23**	**10,368.00**	**N/A**

The following tables summarize the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal and tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Chesapeake Bay Basin. In addition, the tables provide the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 5: Non-Tidal Wetland Project Summary for the Chesapeake Bay Basin										
Project Information		**NT Wetland (Ac)**			**Upland (Ac)**		**Mitigation Acres**	**Proposed Credits**	**Completed Credits**	**Additional Protected Acreage (ac)**
Project ID	**Status**	**Rest/ Cr**	**Pres**	**Enh**	**Rest**	**Pres**				
CB-1	M	15.88	13.72	0	21.33	0.21	51.14	18.68	N/A	0
CB-2	C	0	11.18	0	0	2.79	13.97	-	1.26	0
CB-3	C	0	59.53	0	0	0	59.53	-	5.95	47.45
CB-4	C	0	2.64	0	0	0	2.64	-	0.26	33.81
CB-6	C	0	37.14	0	0	16.18	53.32	-	4.52	0
CB-7	C	0	3.49	0	0	0.21	3.7	-	0.36	0
CB-8/ YH-4	PC	0	361.1	0	0	150.4	511.5	43.63	N/A	0
CB-10	M	12.5	5.87	0	4.2	18.2	41	14.28	N/A	0
CB-11	PC	0	34	0	0	13.4	47.4	4.07	N/A	0
CB-13	C	0	93	0	0	35	128	-	11.05	158
CB-15	PC	0	15	0	0	2.62	17.62	1.63	N/A	28.38
CB-17	P	14	95	0	0	23	132	24.65	N/A	34
CB-18	LP	0	66	0	0	44	110	8.80	N/A	69
CB-19	P	3	91.35	0	12.15	37.34	143.84	14.81	N/A	28
CB-20	LP	0.00	109.00	0.00	0.00	39.00	148	12.85	N/A	107.00
Sub-totals		**45.38**	**998.02**	**0.00**	**37.68**	**382.35**	**1463.66**	**143.4**	**23.41**	**505.64**
Total Acres of Non-Tidal Impacts					**45.14**					
Total Mitigation Liability					**85.34**					
Total Proposed Credits					**166.81**					
Percent of Wetland Acreage Replacement					**100.5**					

LP - Pending finalization of land protection

P - Planning / permitting

D - Pending delineation / assessment

C - Closed

I - Restoration/Enhancement/Creation activities in progress

M - Mitigation monitoring

CA - Corrective actions necessary

PC - Pending project closure

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Table 6: Tidal Wetland Project Summary for the Chesapeake Bay Basin									
Project Information		**Tidal Marsh**	**Tidal**	**Tidal**	**Upland Buffer**	**Mitigation Acres**	**Proposed Credits**	**Completed Credits**	**Additional Protected**
Project ID	**Status**	**Rest**	**Enh**	**Pres**	**Pres**				
CB-1	M	0	0	13.5	0	13.5	1.35	N/A	0
CB-2	C	0	0	30.77	0	30.77	-	3.08	0
CB-5/CH-12	C	0	70	0	0	70	-	1.4	0
CB-13	C	0	0	33	21	54	-	4.35	0
CB-16	D, PC	0	0	3.58	1.84	5.42	0.45	N/A	42.58
CB-17	P	0	0	40	15	55	4.75	N/A	0
CB-18	LP	0	0	66	0	66	6.6	N/A	0
Acre Sub-totals		**0.00**	**70.00**	**186.85**	**37.84**	**240.69**			**42.58**
Credit Sub-totals		**0.00**	**1.40**	**18.69**	**1.89**		**13.15**	**8.83**	
Total Acres of Tidal Impacts			**1.06**						
Total Mitigation Liability			**1.06**						
Total Proposed Credits			**21.98**						
Percent of Wetland Acreage Replacement			**0.0**						

LP - Pending finalization of land protection	I - Restoration/Enhancement/Creation activities in progress
P - Planning / permitting	M - Mitigation monitoring
D - Pending delineation / assessment	CA - Corrective actions necessary
C - Closed	PC - Pending project closure

As noted in Section II, the Fund has been used to mitigate for 1,399 linear feet of permitted stream impacts in the Chesapeake Bay River Basin through 2009. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Chesapeake Bay Basin. To date all projects have been approved through pre-USM funds.

Table 7: Stream Project Summary for the Chesapeake Bay Basin					
Project ID	**Project Status**	**Stream Mitigation Area (ac)**	**Channel Length in Mitigation Area (lf)**	**Mitigation Activity Description**	**Additional Protected Acreage (ac)**
CB-3*	C	24.24	6,613	Riparian buffer preservation of 6,613 lf along the right bank of Dragon Run with an existing mature wooded buffer extending 100 to 225 feet from the edge of the protected stream and wetland complex.	Reported under the wetlands summary
CB-4*	PC	5.55	2,205	Riparian buffer preservation of 2,205 lf along the right bank of Timber Branch Swamp with an existing mature wooded buffer extending 100 feet from the edge of the protected stream and wetland complex.	Reported under the wetlands summary
CB-6*	C	7.12	1,550	Riparian buffer preservation of 1,550 lf along the right bank of Dragon Run with an existing mature wooded buffer extending 200 feet from the edge of the protected stream and wetland complex.	0
CB-11*	PC	3.6	800	Riparian buffer preservation of 800 lf along the right bank of Dragon Run with an existing mature wooded buffer extending 200 feet from the edge of the protected stream and wetland complex.	0
CB-18	LP	32.5	17,000	Riparian buffer preservation along Dragon Run and un-named tributaries with existing mature wooded buffer extending 200 feet from the stream and wetland complex.	Reported under the wetlands summary
CB-19	P	4.35	8,000	Riparian buffer perservation along Dragon Run and un-named tributaries with existing buffer extending 200 feet from stream or existing as wetlands.	Reported under the wetlands summary
CB-20	LP	41	5,500	Riparian buffer perservation along Dragon Run and un-named tributaries with existing buffer extending 200 feet from stream or existing as wetlands.	Reported under the wetlands summary
	Totals	**118.36**	**41,668**		**0**

Total Impacts: 1,399 lf

ac - acre lf - linear feet

LP - Pending finalization of land protection

I - Restoration/Enhancement/Creation activities in progress

P - Planning / permitting

M - Mitigation monitoring

D - Pending delineation / assessment

CA - Corrective actions necessary

C - Closed

PC - Pending project closure

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Project Summaries

The following section provides a detailed summary of each project located within the

Chesapeake Bay Basin for which the Corps authorized funds during 2009. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Please refer to earlier reports as indicated below for detailed descriptions of project funded prior to 2009.

CB-1 Dameron Marsh (Smith 1)

The purpose of this project is to conduct non-tidal wetland establishment, non-tidal and tidal wetland preservation, and upland buffer restoration and preservation at the Dameron Marsh property in Northumberland County. The funding for this project was approved by the Corps on October 9, 1997. The site was purchased by the Conservancy on December 10, 1997. The site is now managed as a State Natural Area Preserve (NAP) by the Virginia Department of Conservation and Recreation (DCR) Natural Heritage Program. Long-term protection is achieved through the dedication and maintenance of the site as a NAP.

According to the results of four years of hydrological monitoring prior to 2005, the majority of the lower "swale" areas of the site exhibited wetland hydrology. These areas are generally dominated by OBL and FACW species and are often underlain by soils which are developing redoximorphic characteristics. The distinction between upland and wetland is generally abrupt and coincides with the increasing prevalence of woody vegetation in former field crowns, particularly *Morella cerifera*. The 2008 wetland mitigation monitoring of the site showed that only 40% of the vegetation plots on the site exhibited wetland plant communities and that all of the plots exhibited the woody plant stem densities required by the success criteria for the site.

Hydrological monitoring was not accomplished in 2008, however, 100% of groundwater monitoring wells re-deployed in 2009 exhibited continuous saturation for greater than 12.5% of the growing season. Previous vegetative monitoring efforts have identified several invasive herbaceous species on the project site, including common reed, *Phragmites australis*, sercia lespedeza *Lespedeza cuneata*, Japanese honeysuckle, *Lonicera japonica*, and Nepalese browntop, *Microstegium vimineum*. *Phragmites* has been the focus of aerial spray invasive species control measures that have been conducted since 2002. The project site was included in the Eastern Virginia Phragmites Control Project, which is cooperatively managed by DCR- Division of Natural Heritage, The Nature Conservancy and the US Fish and Wildlife Service. Limited ground spraying of glyphosate occurred in 2000 and the first aerial treatment of glyphosate was on ten acres in 2001. In 2002, eight acres were treated with glyphosate and in 2005 imazapyr was aerially applied to 13 acres. Stem counts of *Phragmites* remained relatively unchanged between 2000 and 2003. However, after the imazapyr treatment in 2005, there was an 88% reduction in stem counts, as measured in 2006, compared to 2000. These previously-treated areas were again assessed by the Conservancy for general occurrence and distribution of *Phragmites* and other invasive species during the growing season of 2009. In September 2009, eleven acres were treated aerially with imazapyr with methylated seed oil. While the previous eradication efforts were found to have been largely successful, additional limited assessment and treatment efforts are recommended for 2010 to address isolated stands of *Phragmites* and *Lespedeza*. This is the eighth year post construction and mitigation monitoring is scheduled through 2011 with reports submitted to the Corps in 2011.

CB-2 New Point Comfort (Trimmer)
The purpose of this project is to conduct non-tidal and tidal wetland preservation and upland preservation at the Trimmer property located in Mathews County.

A delineation of surface waters and wetlands on the property was completed in October 2008, and confirmed in November 2008. The non-tidal wetland (11.18 acres) is comprised primarily of mature bottomland hardwood forest. The tidal wetland (30.77 acres) is comprised of both high marsh and intertidal marsh community types. Upland riparian buffer areas (2.79 acres) will be preserved landward from the outside limits of the wetland system. The Conservancy requested official closure of this project in 2009. The project was officially closed via a letter from the Army Corps of Engineers dated November 29, 2009. Funds in the amount of $576.00 were returned to the general balance of the Fund.

CB-3 Dragon Run (Calhoun 1; Piedmont Farms)
The purpose of this project is to conduct a non-tidal wetland, stream, and the associated upland riparian buffer preservation at the Dragon Run (Calhoun 1; Piedmont Farms) site in Middlesex County. This project was officially closed 2008. Please reference the 2008 Annual Report for details on this project.

CB-4 Dragon Run (Byrd)
The purpose of this project is to conduct non-tidal wetland, stream, and the associated upland riparian buffer preservation at the Dragon Run (Byrd) property in King and Queen County. Please see the 2008 Annual Report for additional background information.

A delineation of surface waters and wetlands on the property was conducted by the Conservancy and confirmed by the Corps in 2006. The property is 42 acres with 8.19 acres in the mitigation area including 2.64 acres of forested bottomland wetland preservation, 2,205 linear feet of stream preservation, and 5.5 acres of forested upland riparian buffer preservation. The remaining 33.81 acres are considered “additional protected”.

This site was sold subject to deed restrictions in 2007. Proceeds from the sale, $65,000.00 were returned to the general balance of the Fund. This project was officially closed on March 16, 2009.

CB-5/CH-12 Eastern Virginia Phragmites Control
This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

CB-6 Dragon Run (Calhoun 2; Piedmont Farms)
The purpose of this project is to conduct non-tidal wetland and associated upland buffer preservation and stream and the associated upland riparian buffer preservation at the Dragon Run (Calhoun 2; Piedmont Farms) site in Middlesex County. This project was officially closed 2008. Please reference the 2008 Annual Report for details on this project.

CB-7 Dragon Run (Calhoun 3; Piedmont Farms)
The purpose of this project is to conduct non-tidal wetland and upland buffer preservation at the Dragon Run (Calhoun 3; Piedmont Farms) site in Middlesex County. This project was officially closed 2008. Please reference the 2008 Annual Report for details on this project.

CB-8/YK-4 Upper Crab Neck (BP America)
The purpose of this project is to conduct non-tidal wetland and upland buffer preservation at the Upper Crab Neck (BP America) site in York County. The funding for this project was approved by the Corps on April 21, 2005 and on February 22, 2007. The property was donated to the Conservancy by BP America on May 11, 2006. The Conservancy plans to transfer this site to the Virginia Department of Game and Inland Fisheries (DGIF) subject to Corps approval of the deed restriction. No additional monitoring is required for this project.

A delineation of surface waters and wetlands was confirmed by the Corps in April 2002 and the mapping from this delineation was used to estimate wetland and upland acres in Chesapeake Bay Basin and York River Basin using GIS. The Conservancy is negotiating a transfer of the property, and will request official closure of the project once the transfer is completed.

CB-9 Guinea Neck Site
This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

CB-10 East River (Brooks/Ober)
The purpose of this project is to conduct non-tidal wetland restoration and creation and upland buffer restoration and to support acquisition activities at the East River (Brooks/Ober) property in Mathews County. The project involves a donation of a conservation easement to the Middle Peninsula Land Trust (MPLT) and donation of fee simple interest to the Conservancy. Long-term protection is achieved through the monitoring and enforcement of the easement by the MPLT.

A delineation of surface waters and wetlands within the project limits was confirmed by the Corps on March 12, 2008. This delineation identified 5.87 acres of forested wetlands on the property Based upon a feasibility study conducted by the Conservancy funding was secured in 2007 to restore 12.5 acres of forested non-tidal wetlands and 4.2 acres of upland field through vegetation establishment techniques. Reforestation of the site occurred in spring of 2008. The project also includes the preservation of 5.87 acres of non-tidal forested wetland and 18.2 acres of upland forest.

Monitoring of the project in 2009 indicated that the success criteria for wetlands hydrology was met in only 33% of the continuous groundwater monitoring wells installed in early 2009. While temporary ponding was observed for short durations in the well that met the success criteria, rapid drawdown of the groundwater table following precipitation events was observed in all monitoring wells. Vegetation monitoring in May of 2009

indicated successful establishment of woody tree and shrub species following planting in 2008. Stem density within eight monitoring plots ranged from 693 to 6,549 stems per acre, with an average of 2,427 stems per acre measured across all plots. Wetland plants contributed to greater than 50% of the dominant woody vegetation, as measured by relative stem density, in every monitoring plot. Stem densities for planted woody species ranged from 339 to 555 stems per acre. Monitoring of the herbaceous plant community revealed plant canopy coverage ranging from 18% to 51%, and averaging 38%. Wetland plants contributed to greater than 50% of the dominant plant community across both the herbaceous and woody strata in 6/8 (75%) of the plots. Precipitation was generally shown to be below average during the early part of the 2009 growing season, which may have contributed to both the lack of wetlands hydrology and development of a strong wetland herbaceous plant community. Additional monitoring is planned in 2010. This is the second year post construction and mitigation monitoring is scheduled through 2018 with reports submitted to the Corps in 2010, 2011, 2013, 2015, and 2018.

CB-11 Dragon Run (Friends of Dragon Run)

The purpose of this project is to conduct non-tidal wetland and associated upland buffer preservation and stream and associated upland riparian buffer preservation at this site in King and Queen County. The funding for this project was approved by the Corps on December 7, 2006. A subsequent funding approval was granted on June 16, 2008. The Friends of Dragon Run closed the land acquisition of the property on June 5, 2008. Long-term protection of the site will be accomplished through the monitoring and enforcement of an easement by the Virginia Outdoors Foundation (VOF). No additional monitoring is required for this project.

Stream mitigation consists of the preservation of a 200 foot mature forested riparian buffer along the right bank of approximately 800 linear feet (3.60 acres) of Dragon Run at the southern end of the property. This avoids the “double-dipping” issue for claiming the wetland credits proposed above. A confirmed delineation of the site is required to determine mitigation credit. A wetland delineation of the site was conducted in 2008 and is pending confirmation by the Corps. A wetlands and surface waters delineation was completed in October 2008, and confirmed on February 12, 2009. The delineation confirmed the presence of 33.86 acres of palustrine forested and scrub-shrub wetlands, and 1,004 L.F. of stream channel. The Conservancy will request closing following the recordation of the conservation easement with Virginia Outdoors Foundation.

CB-12 Guilford Shores Site

This project was officially closed 2008. Please reference the 2008 Annual Report for details on this project.

CB-13 – Dameron Marsh/Hughlett Point/Fleet Bay (Thompson et al)

The purpose of this project is to conduct non-tidal and tidal wetland preservation at this site in Northumberland County. The funding for a wetland assessment and delineation and full acquisition of this project was approved by the Corps in three approvals granted on July 27, 2007, June 16, 2008, and November 2, 2008. Long-term protection was achieved through a conservation easement being placed on the property on December 23, 2008. Monitoring and enforcement of the easement will provide the long-term protection. No additional monitoring would be required for this project

A delineation of surface waters and wetlands on the property was conducted and confirmed in 2008. The non-tidal wetland (93 acres) is comprised primarily of mature bottomland hardwood forest. The tidal wetland (33 acres) is comprised primarily of spartina marsh. Upland riparian buffer areas (56 acres) will be preserved landward from the outside limits of the wetland system. Other upland areas, designated as additional protected acreage, are estimated at 158 acres and are comprised of managed timber stands and a small residential area that are not considered part of the mitigation acres. The Conservancy requested official closure of this project in 2009. The project was officially closed via a letter from the Army Corps of Engineers dated November 29, 2009. Funds in the amount of $158,582.93 were returned to the general balance of the Fund.

CB-14 – York Complex (Harris Creek Site)

The purpose of this project was to conduct non-tidal and tidal wetland preservation for wetland mitigation at this site in Hampton along Back River. The Conservancy was unable to reach terms with the landowner and the project was officially closed without mitigation credit via a letter from the Army Corps of Engineers dated December 16, 2008. This project was officially closed 2008. Please reference the 2008 Annual Report for details on this project.

CB-15 – Dragon Run Site

The purpose of this project is to conduct a wetland and upland buffer stream preservation project along Dragon Run in King and Queen County, Virginia. On August 13, 2007, the Corps approved the purchase of the conservation easement over the 46 acre property. Long-term protection will be provided by the conservation easement. Monitoring and enforcement of the conservation easement will maintain the long-term protection of the property.

The Nature Conservancy is currently pursuing the purchase of the conservation easement on this property. A wetlands delineation of the site to determine mitigation credits was completed in December of 2008, and confirmed on February 26, 2009. The delineation confirmed the presence of 14.85 acres of palustrine forested wetlands. The Conservancy will request official closure of the site following easement recordation.

CB-16 – Jacobus Creek (Hampton)

The purpose of this project is to perform wetland and upland buffer preservation on the bayside of Northampton County, Virginia. On September 24, 2008 the Corps approved funding for the legal costs associated with closing on a donated conservation easement on the entire 48 acre property. The site contains 3.58 acres of tidal emergent marsh, as determined by a wetlands delineation completed in 2009, and 1.84 acres of upland buffer that will be preserved to protect the water quality of the nearby aquatic systems. The long term protection of the site was accomplished through the recording of a donated conservation easement to the Conservancy on December 8, 2008. Monitoring and enforcement of the easement will provide the long-term protection. No additional monitoring will be required for this project.

The Conservancy will request closure of this project in 2010 pending confirmation of a surface water delineation of the site to determine credit.

CB-17 – Dameron Marsh/Hughlett Point/Fleet Bay (William Thompson)
The purpose of this project is to provide non-tidal wetland restoration, tidal and non-tidal preservation, and upland buffer preservation of this 223-acre site in Northumberland County, Virginia. On November 2, 2008 the Corps approved funding for the restoration and preservation of the site. The long-term protection of the site was accomplished through the recordation of a conservation easement held by the Conservancy on December 23, 2008. Long-term protection will be achieved through the monitoring and enforcement of the easement by the Conservancy.

The non-tidal wetland restoration of 14.0 acres of forested wetlands will be accomplished through minor grading of the site, plugging/filling of existing drainage ditches and planting of trees on the site. Additional opportunities to incorporate restoration and enhancement of tidal fringe wetlands along the shoreline of Ball Creek may exist, and are currently being investigated further. Approximately 95 acres of non-tidal and 40 acres of tidal wetland preservation will also occur on the site. A 48.00 acre area of upland buffer preservation will ensure the protection of the water quality of the restored and preserved wetlands. An additional 46 acres of land will be protected under the easement.

The design portion of the restoration plan is expected to occur in spring/summer of 2010 with implementation of design occurring in fall/winter of 2010/2011.

CB-18 Dragon Run site #2
The purpose of this project was to purchase land for a wetland and upland buffer preservation along the Dragon Run in Gloucester County, Virginia. On March 16th, 2009 the Corps approved funding for the purchase of this property. The site contains a significant wetland complex along Dragon Run that has not been disturbed in over 100 years. The project consists of the preservation in perpetuity of approximately 132.25 acres of palustrine forested wetlands and 44 acres of associated forested upland buffer. The property contains approximately 17,000 feet of frontage (approximately 10,000 on just one side; 3,500 linear feet on both sides) on the west side of the main stem of Dragon Run and along tributaries to the Dragon that drain from the property.

The long term protection of the site will be accomplished through the purchase and recordation of a conservation easement with the Conservancy. The Conservancy will request closure of this project pending finalization of land protection and completion of a surface water delineation of the site to determine credit.

CB-19 Dragon Run (Carlson)
The purpose of this project is to provide a wetland and upland restoration and stream, wetland and upland buffer preservation project on a 176.5-acre property along Dragon Run in Gloucester and King and Queen County, Virginia. The Nature Conservancy proposed to provide funding for the acquisition of the property. On May 18, 2009, the Corps approved funding for the restoration and preservation of the site. The Conservancy purchased the property in July 2009.

The site contains a wetland complex (estimated 91.35 acres, NWI) along Dragon Run.

Approximately 48 upland acres are being managed for Loblolly pine and hardwoods (e.g. oak, poplar). The property contains approximately 4,100 feet of frontage on the main stem of Dragon Run, 2,200 feet of which encompasses both sides. Dragon Run is a TNC Aquatic Portfolio Conservation Area based on its high water quality and aquatic diversity. The site also falls within the TNC Dragon Run Forest Block Conservation Area, a relatively unfragmented block of mixed pine and hardwood forests. A 15.15 acre field that was formerly used as pasture for horses contains approximately 6.5 acres of hydric soils (Eunola Fine Sandy Loam) and an associated visible seep. Years of agricultural activities have caused the hydric soils area to no longer function as a true wetland. Minor grading to achieve wetland restoration or enhancement is being evaluated.

The project is proposed to generate approximately 3 acres of wetland restoration, 91.3 acres of wetland preservation, 12 acres of upland buffer restoration, 37 acres of upland buffer preservation, and 1,400 linear feet (4.35 acres) of stream buffer mitigation. An additional 28.3 acres of land will be protected through this project.

The design portion of the restoration plan is expected to occur in spring/summer of 2010 with implementation of design occurring in fall/winter of 2010/2011.

CB-20 Dragon Run Site #3

The purpose of this project was to purchase land for a wetland and stream preservation project along Dragon Run in Middlesex County, Virginia. The Nature Conservancy will hold and monitor a donated conservation easement on the property. On December 21, 2009 the Corps approved funding for the purchase of this property.

The site contains a wetland complex (estimated 109 acres, NWI) along Dragon Run. Approximately 155 upland acres are currently being managed for loblolly pine and hardwoods (e.g. oak, poplar). The property contains approximately 3,700 feet of frontage on the main stem of Dragon Run. An additional 1,800 feet of streams are located on the property on four small tributaries to the Dragon. Both sides of each tributary are on the property. Dragon Run is a TNC Aquatic Portfolio Conservation Area based on its high water quality and aquatic diversity. The site also falls within the TNC Dragon Run Forest Block Conservation Area, a relatively unfragmented block of mixed pine and hardwood forests.

Based upon available information, TNC considers this site an excellent opportunity for preservation of a large contiguous wetland tract with substantial buffers. Additionally, stream channels associated with four unnamed tributaries draining to Dragon Run, an open-water impoundment, and associated 200-foot buffers around these features will be preserved as part of the project. One hundred and seven acres located outside of the mitigation areas will be considered as additional protected lands. The long term protection of the site will be accomplished through the recordation of a conservation easement dedicated to the Conservancy upon closing. The Conservancy will request closure of this project in 2010 pending finalization of land protection and completion of a surface water delineation of the site to determine credit.

Chowan River Basin

The Chowan River Basin is comprised of five HUCs (03010201, 03010202, 03010203, 03010204, and 03010205) located in southeastern Virginia extending into northeastern North Carolina. It encompasses the northernmost portion of the Albemarle-Pamlico drainage and is among the best developed embayed wetland environments of the outer Mid-Atlantic Coastal Plain Ecoregion estuary and includes much of the original extent of the Great Dismal Swamp. Conservation targets include blackwater swamp aquatic system, riverine and basin swamp forest, brownwater tributaries and rivers, Atlantic white cedar swamp, bottomland hardwood forest, Roanoke logperch, Atlantic pigtoe, red cockaded woodpecker, and seepage wetlands.

The projects discussed in this section serve as mitigation for permitted impacts within the Chowan River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2009 are listed on the below tables. Complete project descriptions for projects approved prior to 2009 may be found in earlier reports as indicated below. Updates are given for each project as applicable. Complete descriptions of projects approved during 2009 are provided below.

The following table provides a summary of projects for which funds were approved in the Chowan River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

Table 8: Approved Project Summary for the Chowan River Basin						
Project ID	Project Name	Purpose of Proposal	Corps Approval Date	Funds Authorized		
				Non-Tidal Wetland Projects ($)	Tidal Wetland Projects ($)	Stream Projects ($)
CH-1	Northwest River (Kellam Rigato	M	12/20/1995	37,020	0	0
			8/28/2008	4,449	0	0
CH-2	North Landing River (Onesimus Ministries)	M	6/30/1997	24,325	0	0
CH-3	Dismal Swamp (Bruff)	M	10/27/1997	37,000	0	0
			8/28/2008	4,969	0	0
CH-4	North Landing River (Mayo)	M	8/28/1998	8,800	0	0
CH-5	Northwest River (Benefits)	M	10/13/1998	331,215	0	0
			8/28/2008	6,361	0	0
CH-6	Northwest River (Hall)	M	5/26/1999	143,204	0	0
CH-7	Nawney Creek (Knight)	M	5/23/2000	120,110	0	0
CH-8	Northwest River (Su)	M	3/16/2001	395,230	0	0
			2/8/2008	25,000	0	0
CH-9 / LJ-4	Northwest River (Stephens)	M	7/17/2002	625,000	0	0
CH-10	Northwest River (Powers)	M	3/7/2003	333,341	0	0
		M	10/27/2004	20,000	0	0
CH-11	Nawney Creek (Fentress)	M	12/19/2003	135,000	0	0
CB-5 / CH-12	Eastern Virginia Phragmites Control	M	8/30/2002	0	20,000	0
			9/9/2003	0	20,000	0
			8/31/2004	0	12,666	0
CH-13	Northwest River (SP Forests, LLC)	M	2/2/2006	366,700	0	0
CH-14	Raccoon Creek Pinelands site	M	2/8/2008	0	0	77,150
CH-15	Blackwater River (Owen)	M	7/17/2009	0	0	77,150
			Totals	**2,617,724**	**52,666**	**154,300**
			Grand Total	**2,824,690**		

M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey

Table 9 provides a summary of projects which have closed in the Chowan River Basin.

Table 9: Closed Project Summary for the Chowan River Basin							
Project ID	Corps Approval Date	Corps Closure Date	Amount Approved ($)	Amount Unallocated ($)	Wetland Credits	Stream Activity	
						Buffer Preservation (lf)	Livestock Exclusion (lf)
CH-2	6/30/1997	8/14/2007	24,325	25	5.3	N/A	N/A
CH-3	6/1/1997	11/29/2009	37,000.00	73.18	3.17	N/A	N/A
	8/4/2008		4,969.05				
CH-4	8/28/1998	8/14/2007	8,800	40	1.13	N/A	N/A
CH-5	8/24/98	12/21/2009	331,214.88	0	82.75	N/A	N/A
	8/04/08		6,361.48				
CB-5/ CH-12	8/30/2002	8/14/2007	52,666	9,475	1.4	N/A	N/A
	9/9/2003						
	8/31/2004						
CH-14	1/22/2008	9/28/2009	77,150	77,150	N/A	N/A	N/A
Totals			**542,486**	**86,763**	**93.75**	**N/A**	**N/A**

The following tables summarize the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal and tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Chowan River Basin. In addition, the tables provide the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted.

Table 10: Non-Tidal Wetland Project Summary for the Chowan River Basin										
		NT Wetland (Ac)			Upland (Ac)		Mitigation Acres	Proposed Credits	Completed Credits	Additional Protected Acreage (ac)
Project ID	Status	Rest/Cr	Pres	Enh	Rest	Pres				
CH-1	D,PC	0	125.34	0	0	40.55	165.89	14.56	N/A	0
CH-2	C	0	51.8	0	0	2.4	54.2	-	5.3	0
CH-3	C	2.66	0	0	7.6	0	10.26	-	3.17	0
CH-4	C	0	9.45	0	0	3.75	13.2	-	1.13	0
CH-5	C	12	706	0	0	6	724	-	82.75	11
CH-6	M	25	0	0	2	3.8	30.8	25.32	N/A	0
CH-7	M	8	0	0	10	0	18	8.67	N/A	0
CH-8	M	49	73.28	0	4	7	133.28	56.94	N/A	0
CH-9/ LJ-4	M	61	112.1	0	10	2.8	185.9	73.02	N/A	0
CH-10	M	25.25	97.1	0	0.5	60.15	183	38.00	N/A	0
CH-11	M	19	0	0	3.79	0	22.79	19.25	N/A	0
CH-13	P	30	120	0	0	0	150	42.00	N/A	0
CH-15	D,PC	0	33.6	0	0	1.5	35.1	3.435	N/A	0
Sub-totals		**231.91**	**1328.67**	**0.00**	**37.89**	**127.95**	**1726.42**	**373.55**	**150.83**	**11.00**

Total Acres of Non-Tidal Impacts	**41.57**
Total Mitigation Liability	**76.17**
Total Proposed/Completed Credits	**373.55**
Percent of Wetland Acreage Replacement	**557.9**

LP - Pending finalization of land protection	I - Restoration/Enhancement/Creation activities in progress
P - Planning / permitting	M - Mitigation monitoring
D - Pending delineation / assessment	CA - Corrective actions necessary
C - Closed	PC - Pending project closure

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Table 11: Tidal Wetland Project Summary for the Chowan River Basin							
Project Information		**Salt Marsh**	**Tidal**	**Tidal**	**Upland Buffer Pres**	**Mitigation Acres**	**Completed Credits**
Project ID	**Status**	**Rest**	**Enh**	**Pres**	**Pres**		
CB-5/CH-12	C	0	70	0	0	70	1.4
Acre Sub-totals		**0**	**70**	**0**	**0**	**70**	
Credit Sub-totals		**0**	**1.4**	**0**	**0**		
Total Acres of Tidal Impacts					**0.01**		
Total Mitigation Liability					**0.01**		
Total Proposed/Completed Credits					**1.4**		
Percent of Wetland Acreage Replacement					**0**		

LP - Pending finalization of land protection
P - Planning / permitting
D - Pending delineation / assessment
C - Closed
I - Restoration/Enhancement/Creation activities in progress
M - Mitigation monitoring
CA - Corrective actions necessary
PC - Pending project closure

As noted in Section II, the Fund has been used to mitigate for 2,416 linear feet of permitted stream impacts in the Chowan River Basin through 2009. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Chowan River Basin.

Table 12: Stream Project Summary for the Chowan River Basin					
Project ID	**Project Status**	**Stream Mitigation Area (ac)**	**Channel Length in Mitigation Area (lf)**	**Mitigation Activity Description**	**Additional Protected Acreage (ac)**
CH-15*	D, PC	22.9	6,460	Riparian buffer preservation along 2,710 lf of the south bank of the Blackwater River and Cypress Swamp. Riparian buffer preservation along 3,750 lf of one bank of an un-named tributary. Riparian buffers 200' wide.	Reported under the wetlands summary
Totals		**22.9**	**6,460**		
Total Impacts (lf)		**2,416**			

ac - acre
lf - linear feet
LP - Pending finalization of land protection
P - Planning / permitting
D - Pending delineation / assessment
C - Closed
I - Restoration/Enhancement/Creation activities in progress
M - Mitigation monitoring
CA - Corrective actions necessary
PC - Pending project closure
*Project includes wetland mitigation

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping")

Project Summaries
The following section provides a detailed summary of each project located within the Chowan River Basin for which the Corps authorized funds through 2009. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Please refer to earlier reports for additional background information on projects approved prior to 2009.

CH-1 Northwest River (Kellam Rigato)
The purpose of this project is to conduct non-tidal wetland and upland buffer preservation at the Northwest River (Kellam Rigato) property in the City of Chesapeake. The funding for this project was approved by the Corps on December 20, 1995. Subsequent funding was approved on August 28, 2008. The site was purchased by the Conservancy on December 22, 1995. Long-term protection is achieved through Conservancy ownership. No additional monitoring is required for this project.

An assessment level wetland delineation of the site will be confirmed by the Corps in 2010 to determine mitigation credit. The Conservancy anticipates closing the project in 2010.

CH-2 North Landing River (Onesimus Ministries)
This project was officially closed in 2007. Details about the project can be found in the 2007 Annual Report.

CH-3 Dismal Swamp (Bruff)
The purpose of this project is to conduct non-tidal wetland restoration and upland buffer restoration at the Dismal Swamp (Bruff) property in Suffolk County. The funding for this project was approved by the Corps on October 27, 1997. Additional funding was approved on August 28, 2008. The site was purchased by the Conservancy on January 20, 1998. The site is expected to be transferred with an approved protective instrument to the United States Fish and Wildlife Service (FWS) in 2010. Additional background information is available in the 2008 Annual Report.

A delineation of surface waters and wetlands on the property was conducted in 2008 and confirmed on February 10, 2009. The non-tidal wetland restoration area (2.66 acres) is comprised primarily of mature bottomland hardwood forest. Upland riparian buffer restoration areas (7.60 acres) will be preserved landward from the outside limits of the wetland system. The mitigation activities have been completed with the project resulting in a total of 3.17 non-tidal wetland credits within the Chowan River Basin. The Conservancy requested closure of this project in 2009. The project was officially closed via a letter from the Army Corps of Engineers dated November 29, 2009. Funds in the amount of $73.18 were returned to the general balance of the Fund.

CH-4 North Landing River (Mayo)
This project was officially closed in 2007. Details about the project can be found in the 2007 Annual Report.

CH-5 Northwest River (Benefits)
The purpose of this project is to conduct non-tidal wetland restoration and enhancement and non-tidal wetland and upland buffer preservation at the Northwest River (Benefits) property in southern Chesapeake. The funding for this project was approved by the Corps on October 13, 1998. Additional funding was approved on August 28, 2008. The site was purchased by the Conservancy on December 17, 1998 and long-term protection is achieved through this ownership. Please see 2008 Annual Reports for additional background information about this site.

The mitigation activities have been completed resulting in a total of 82.75 credits to mitigate for non-tidal wetland impacts within the Chowan River Basin. The non-tidal wetland restoration (12 acres) is comprised primarily of mature bottomland hardwood forest. The non-tidal wetland preservation (706 acres) will be preserved landward from the outside limits of the wetland system. The upland preservation (6 acres) will be preserved. Other upland areas, designated as additional protected acreage, are estimated at 11 acres and are comprised of managed timber stands and a small residential area that are not considered part of the mitigation acres. The Conservancy requested closure of this project in 2009. The project was officially closed via a letter from the Army Corps of Engineers dated December 21, 2009. All funds allocated to this project were spent on the acquisition of wetland credits.

CH-6 Northwest River (Hall)
The purpose of this project is to conduct non-tidal wetland and upland buffer restoration and upland buffer preservation at the Northwest River (Hall) property in southern Chesapeake. The funding for this project was approved by the Corps on May 26, 1999. Additional background information is available in the 2008 Annual Reports.

Based upon soil sampling conducted prior to the wetland restoration activities, there is a slight ridge of approximately 5 acres that did not exhibit hydric soils criteria, but shallow groundwater wells indicate wetland hydrology is present. Thus, this area must be carefully evaluated during the final site delineation to confirm/determine the extent to which wetlands are established. Due to the overall success of the site in meeting wetland criteria in most years, the Conservancy will conduct a final delineation of the site to determine mitigation credits and request to close this project in 2010.

CH-7 Nawney Creek (Knight)
The purpose of this project is to conduct non-tidal wetland and upland buffer restoration at the Nawney Creek (Knight) property in Virginia Beach. The funding for this project was approved by the Corps on May 23, 2000. The site was purchased by the Conservancy on September 27, 2000, and long-term protection is achieved through this ownership. Monitoring was completed in 2003, 2004, 2005, 2007, 2008. Supplemental hydrology monitoring was conducted in 2009.

Based upon site observations and the well data collected thus far there are portions of the site that fail to meet the Corps hydrology criteria in most years. These are primarily those areas that are adjacent to perimeter ditches or located at field crowns, both areas which tend to support non-hydrophytic herbaceous vegetation and comprise up to approximately 50% of the property. There is obvious wetland development in the vicinity of interior ditches that were plugged and are at slightly lower elevations than field crowns

as evidenced by prolonged standing water and a predominance of hydrophytes. Survival of planted seedlings is high and growth is good. Woody stem densities of 400 stems per acre or greater were recorded in most areas during the 2008 monitoring of the site. Although stem densities for the site are good, a high percentage of the sampling plots (~73%) failed to meet hydrophytic vegetation requirements. Well data from 2008 showed that only 20% of the wells displayed wetland hydrology. The public notice issued by USACE in March 2008 characterizes meteorologic and hydrologic conditions antecedent to the growing season as drier than typical and therefore unreliable for well data monitoring wetland determination. Similarly, neither of the two wells for which data were obtained in 2009 exhibited wetlands hydrology. However. the critical season for wetland hydrology (January – March) was also drier than normal for 2009. In light of these facts, the Conservancy reduced the scope of the wetland restoration acres to approximately 8.0 acres with the remaining 10.0 acres as upland restoration. This site is on a post construction and mitigation monitoring plan that extends through 2013 with reports submitted to the Corps in 2010 and 2013.

CH-8 Northwest River (Su)

The purpose of this project is to conduct non-tidal wetland restoration and upland buffer restoration and non-tidal wetland and upland buffer preservation at the Northwest River (Su) property in southern Chesapeake. The funding for this project was approved by the Corps on March 16, 2001. Additional funding for this project was approved on February 8, 2008. The site was purchased by the Conservancy on April 28, 2000, and long-term protection is achieved through this ownership. Two adjacent properties (projects CH-5 and CH-6) were acquired in separate purchases, together representing significant wetland restoration and preservation acres.

Hydrological monitoring through 2007 generally indicated a majority of monitoring wells exhibited continuous saturation for greater than 12.5% of the growing season. However, in 2008, a majority of the hydrological monitoring wells failed to read, and insufficient data to determine site hydrology exists. The Conservancy re-deployed the wells at the site and collected hydrology data during the 2009 growing season. Two of the nine wells monitored in 2009 met the 12.5% success criteria for continuous saturation. Four of the nine wells showed continuous saturation for 8-12.5% of the growing season and one of the wells failed to show continuous saturation for greater than 5% of the growing season. However. the critical season for wetland hydrology (January – March) was drier than normal for 2009. 2008 vegetation sampling data shows that only 47% of the site is meeting hydrophytic vegetation criteria. Monitoring also showed that a majority of the site is meeting the woody stem density required by the site success criteria. Monitoring and observations of the vegetation development on the site indicate that loblolly pine (*Pinus taeda*) is colonizing in large numbers, resulting in high stem densities, particularly in the drier areas of the site (~5 acres); however, the majority of other colonizing woody sapling species are native, wetland plants. An approximately 2.8-acre area has been invaded by cattail (*Typha latifolia*). This area is well contained by topography and has little threat of jeopardizing the rest of the restoration. At this point, monitoring of cattail stand size and locations will continue to determine if corrective action is necessary. If the cattail area increases, volunteer efforts to remove it may be explored. Generally, given the favorable hydrological and vegetation monitoring thus far, the Conservancy expects approximately 49.0 acres to continue to meet wetland criteria. This is the eighth year post construction and mitigation monitoring is scheduled through 2011 with a report submitted to the Corps in 2011. Supplemental hydrological monitoring will be completed

by the Conservancy in 2010.

Since 2002 the project has been the focus of multiple research efforts led by Dr. Robert Rose of Old Dominion University. Researchers have investigated the ecology of populations and communities of small mammals, praying mantids, and pine tree demography in southeastern Virginia. These studies have resulted in two completed MS theses, and two more were reportedly in progress as of early 2009. Several manuscripts and professional presentations have also resulted from the research. Importantly, the researchers have investigated pine mortality caused by rodents eating bark in late winter/early spring. Based on a study conducted in 2005, this research estimates that more than two-thirds of at least 15,000 pine trees within a 1-hectare grid were partially girdled and 15 percent were killed by girdling. The researchers contend that this is the first report of cotton rats eating pine bark.

CH-9/LJ-4 Northwest River (Stephens)

The purpose of this project is to conduct non-tidal wetland restoration and upland buffer restoration and non-tidal wetland and upland buffer preservation at the Northwest River (Stephens) property in Chesapeake. The funding for this project was approved by the Corps on July 17, 2002. The Conservancy proposed to restore wetlands and uplands through site modifications and to preserve wetlands and uplands. The site was purchased by the Conservancy on November 15, 2002, and long-term protection is achieved through this ownership.

Annual shallow groundwater monitoring indicates that much of the site exceeds the target threshold for hydrology under normal conditions, although well stations that are located in close proximity to unplugged perimeter ditches experience the least promising hydrology results. While this drainage was anticipated, continued monitoring is necessary to determine the extent of drainage that prevents wetland establishment. Even in the overall dry conditions of the area in 2008, a majority of the wells (87%) met wetland hydrology criteria. Survival of planted seedlings is high within much of the site and many species displayed fairly vigorous growth. Red maple and sweet gum are the dominant colonizing, volunteer woody species across the entire site. This is most obvious at the north end of the restoration fields adjacent to a mature forest line and a large ditch, which the Conservancy was not permitted to block, where colonizing seedlings are out-competing planted seedlings. However, based upon the monitoring the majority of woody species that will comprise the dominant stratum of the site are native wetland plants. The 2007 and 2008 monitoring of the site identified two aggressive invasive species on the site. Purple loosestrife (*Lythrum salicaria)* and Chinese privet *(Ligustrum sinense)* are present in areas on the site. Geographic coordinates were obtained for occurrences of *Lythrum salicaria*, and the Conservancy subsequently coordinated a volunteer work day involving its removal from along a roadside and property boundary in June. All visible plants were removed from this area leaving only six small areas of occurrence to be treated within the middle of the site. Additional assessment and treatment efforts are planned for this species in 2010. This is the sixth year post construction and mitigation monitoring is scheduled through 2013 with reports submitted to the Corps in 2010 and 2013.

Since 2005 the project has been the focus of multiple research efforts led by Dr. Robert Rose of Old Dominion University. Researchers have investigated the ecology of populations and communities of small mammals, and praying mantids in southeastern

Virginia. The current year's research efforts at the project site represent the fifth year of study.

CH-10 Northwest River (Powers)

The purpose of this project is to conduct non-tidal wetland restoration and non-tidal wetland and upland buffer preservation at the Northwest River (Powers) property in Chesapeake. The initial funding for this project was approved by the Corps on March 7, 2003. The Conservancy requested additional funding for acquisition and restoration, which was authorized by the Corps on October 27, 2004. The site was purchased by the Conservancy on January 31, 2001 and the site has been designated as a Natural Area Preserve under the management of Department of Conservation and Recreation (DCR).

A closely spaced ditch network historically drained the agricultural fields on the site. In late 2004, the ditches in the agricultural fields were filled, the fields were graded to remove field crowns, and a perimeter berm was installed to prevent flooding adjacent properties. In early 2005, the restoration site was planted with 6,300 and 2,800 bare root tree and shrub seedlings respectively. Five automatic recording shallow groundwater wells were installed in 2005. The first year of hydrological monitoring indicated that only a portion of the site was meeting hydrological criteria under normal conditions; however, the extremely dry preceding conditions in 2006 and 2007 resulted in deeper groundwater tables. Vegetation monitoring and site observations confirm that there is relatively high mortality of planted seedlings and moderate natural colonization of native wetland saplings. The results indicate that much of the project area is failing to meet planted seedling survival objectives while meeting stem density requirements when natural colonizing seedlings are included.

Monitoring of the project in 2009 indicated that the 12.5% success criteria for wetlands hydrology was met in 3/5 (60%) of the continuous groundwater monitoring wells. One well satisfied the 8-12% growing season standard, and one well failed. Vegetation monitoring in July of 2009 indicated successful establishment of wetland woody tree and shrub species. Of the nineteen plots sampled, sixteen had greater than 400 stems per acre (84%), exceeding the 400 stems per acre success criteria. Stem density values ranged from 247 to 3,128 stems per acre, with an average of 984 stems per acre observed across all plots. Stem densities for planted woody species ranged from 15 to 370 stems per acre, with an average of 133 planted stems per acre measured across all plots. Wetland plants contributed to greater than 50% of the dominant woody vegetation, as measured by relative stem density, in 19/19 (100%) of the monitoring plots. Monitoring of the herbaceous plant community revealed total plant canopy coverage ranging from 34% to 111%, and averaging 66%. Wetland plants contributed to greater than 50% of the dominant plant aerial coverage in 8/19 (42%) of the monitoring plots, indicating that a hydrophytic herbaceous community may not be established across the entire site. However, wetland plants contributed to greater than 50% of the dominant plant community across both the herbaceous and woody strata in 16/19 (84%) of the plots. 2009 was the fifth year post construction and mitigation monitoring is scheduled through 2014 with reports submitted to the Corps in 2010 and 2013.

CH-11 Nawney Creek (Fentress)
The purpose of this project is to conduct non-tidal wetland and upland buffer restoration at the Nawney Creek (Fentress) property in Virginia Beach. The funding for this project was approved by the Corps on December 19, 2003. The site was purchased by the Conservancy on December 13, 2003, and long-term protection is achieved through this ownership. 2010 is the fifth year post construction and mitigation monitoring is scheduled through 2013 with reports submitted to the Corps in 2010 and 2013.

Large portions of the site exhibit ponding for a significant duration in most years. Annual hydrology results in 2004 and 2005 indicated that much of the site was meeting the hydrologic criteria. Fewer wells met requirements for wetland hydrology in 2007 and 2008. The public notice issued by USACE in March 2008 characterizes meteorologic and hydrologic conditions antecedent to the growing season as drier than typical and therefore unreliable for well data monitoring wetland determination. Percentage of the site exhibiting hydrophytic vegetation was estimated as 33% in 2008, whereas 66% and 80% of the site met the success criteria in 2005 and 2007, respectively, indicating drier conditions may have supported development of non-hydrophytes. The 2008 monitoring plot analysis indicated that while planted tree survival is low, natural recruitment is helping the site to meet the woody stem per acre success criteria for the majority of the site. Seedling mortality was presumably caused by long-duration flooding in some areas of the site and intense herbaceous vegetation competition. Wetlands development may be limited to the immediate vicinity of interior ditches that were plugged and are at slightly lower elevations than field crowns as evidenced by prolonged standing water and a predominance of hydrophytic vegetation. The Conservancy will conduct complete monitoring of the site in 2010, including an analysis of the vegetation communities in areas exhibiting ponding for significant durations. Preliminary estimates indicate the scope of wetlands restoration acres may be reduced by a maximum of 6 acres based on this analysis. This is the fifth year post construction and mitigation monitoring is scheduled through 2013 with reports submitted to the Corps in 2010 and 2013.

CB-5/CH-12 Eastern Virginia Phragmites Control
A summary of the project details is included under the Chesapeake Bay Basin.

CH-13 Northwest River (SP Forests LLC)
The purpose of this project is to conduct non-tidal wetland restoration and preservation at the Northwest River (SP Forests, LLC) property in the City of Chesapeake. The funding for this project was approved by the Corps on February 2, 2006. An amended approval letter was issued by Corps on February 22, 2007. The Conservancy proposed to restore drained forest land by plugging a large ditch system and to preserve wetlands on 150 acres located within the 3,800-acre parcel. The site was purchased by the Virginia Department of Game and Inland Fisheries (DGIF) on September 13, 2006, and is managed as the Cavalier Wildlife Management Area.

This project is in the planning/permitting phases and is planned for construction in 2010.

CH-14 Raccoon Creek Pinelands site

The purpose of this project is to conduct stream and buffer preservation on the Raccoon

Creek Pinelands site in Sussex County, Virginia.

The Conservancy and interested landowner were unable to reach agreeable terms with seller. No funds were spent for this project; therefore, the entire balance of allocated funds $77,150.00 have been returned to the general balance of the Trust Fund and tracked in the Chowan River Basin. The project was officially closed via a letter from the Army Corps of Engineers dated September 28, 2009.

CH-15 Blackwater River (Owen)

The purpose of this project is to conduct stream, wetland, and riparian buffer preservation along the Blackwater River in Surry County, Virginia. On September 28, 2009 the Corps approved funding for the costs associated with conducting a stream and wetland delineation along with acquisition of a conservation easement. The overall site is 58 acres, which is comprised of approximately 33.6 acres of wetlands and 1.5 acres of upland buffer that will be preserved in perpetuity, protected from all development, timber harvesting and other land disturbing activities. These areas will be preserved to protect the water quality of the nearby aquatic systems. The long term protection of the site was accomplished through the recordation of a conservation easement, which was dedicated to the Conservancy on November 20, 2009. No additional monitoring will be required for this project.

The Owen tract is situated along the floodplain of the Blackwater River, immediately downstream of the Blackwater River/Cypress Swamp confluence. The channels of all three waterways on the property are stable and require no restoration or enhancement actions. The floodplain area flanking the streams is dominated by semi-permanently flooded swamp forest supporting a mature cypress (*Taxodium distichum*) /tupelo (*Nyssa aquatica*) community. Various oak (*Quercus*) species, poplar (*Liriodendron tulipifera*) and ash (*Fraxinus*) occur along the seasonally flooded swamp margins and the upper reaches of the un-named tributary. The Virginia Department of Conservation and Recreation has identified floodplain areas in the vicinity of the subject tract as core areas of high conservation value in their Conservation Lands Needs Assessment for coastal Virginia. The Nature Conservancy has identified the entire Blackwater River watershed as priority conservation area in its Ecoregional Plan for the Mid-Atlantic Coastal Plain Ecoregion and as an Aquatic Portfolio Conservation Area for the South Atlantic Basin.

The Conservancy will conduct a surface water delineation of the property in 2010. Pending confirmation of the delineation, the Conservancy will request credit determination and closure of this project in 2010.

Lower James River Basin

The Lower James River Basin is comprised of two HUCs (02080208 and 02080206) encompassing the portion of the James River from Richmond east to Norfolk. This basin is located within both the Conservancy's Mid-Atlantic Coastal Plain and the Chesapeake Bay Lowlands Ecoregions and is the focal area of several conservation groups, including the James River Association and the Chesapeake Bay Foundation, as well as efforts of federal, state and local governments. Conservation targets include tidal freshwater and brackish marshes, Chesapeake Bay lowlands estuarine and stream systems, waterfowl and colonial nesting waterbirds, blue crabs, and spawning habitat for striped bass, shad, herring, and yellow perch.

The projects discussed in this section serve as mitigation for permitted impacts within the Lower James River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2009 are listed on the below tables. Complete project descriptions for projects approved prior to 2009 may be found in earlier reports as indicated below. Updates for 2009 are given for each project as applicable. No new projects were approved in 2009.

Due to historical hydrology modifications, one of the non-tidal projects (CH-9/LJ-4) mitigates for impacts within both the Lower James River Basin and the Chowan River Basin. The total funds authorized by the Corps and crediting value for this project have been appropriately divided between the two basins.

The following table provides a summary of projects for which funds were approved in the Lower James River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type. See project summaries for more information.

Table 13: Approved Project Summary for the Lower James River Basin						
Project ID	Project Name	Purpose of Proposal	Corps Approval Date	Funds Authorized		
				Non-Tidal Wetland Projects ($)	Tidal Wetland Projects ($)	Stream Projects ($)
LJ-1	Chickahominy River (Walters)	M	4/6/00	401,105	0	0
LJ-2	Chickahominy River (Cheswick Park)	M	9/10/01	0	0	15,000
LJ-3	VMRC Oyster Reef	M	7/12/02	0	50,650	0
CH-9 / LJ-4	Northwest River (Stephens)	M	7/17/02	625,000	0	0
LJ-5*	Isle of Wight site	A	5/30/03	2,500	0	0
LJ-6	Chickahominy River (Rogers-Chenault)	M	12/14/04	149,450	0	0
LJ-7	Great Dismal Swamp NW Section (Jacobson et al.)	A	8/3/06	4,000	0	0
		AC, C	12/7/06	1,575,025	0	0
LJ-8	Lower Chickahominy River (Church Point Farm, LLC)	AC, M	12/15/06	49,786	0	0
LJ-9	James River site	M	12/15/06	0	0	319,032
LJ-10	James River site #2	F,C	8/10/07	21,000	0	21,000
		F	11/16/07	1,050	0	1,050
		C	2/8/08	6,500	0	6,500
		AC, M	6/27/08	478,700	38,000	478,700
LJ-11	Chickahominy River site	A	8/28/08	5,000	0	5,000
LJ-12	James River site #3	AC	11/2/08	82,000	0	738,000
			Totals	**3,401,116**	**88,650**	**1,584,282**
			Grand Total	**5,074,048**		

* Project is no longer pursued due to landowner constraints or the results of feasibility studies.

M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development;
F - Feasibility Study; BS - Boundary Survey

The following tables summarize the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal and tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Lower James River Basin. In addition, the tables provide the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 14: Non-Tidal Wetland Project Summary for the Lower James River Basin										
Project Information		**NT Wetland (Ac)**			**Upland (Ac)**		**Mitigation Acres**	**Proposed Credits**	**Completed Credits**	**Additional Protected Acreage (ac)**
Project ID	**Status**	**Rest/ Cr**	**Pres**	**Enh**	**Rest**	**Pres**				
LJ-1	M	20.00	198.00		23.00	32.78	273.78	42.97		
LJ-4/ CH--9	M	61.00	112.10		10.00	2.80	185.90	73.02		
LJ-6	C	_	64.70			29.60	94.30	-	7.95	
LJ-7	P	30.00	23.50	2.50	24.00	4.00	84.00	34.98		
LJ-8	C		368.61			47.30	415.91	-	33.09	516.45
LJ-10	P, LP	50.00	15.00				65.00	51.50		172.00
LJ-12	LP		15.00			26.00	41.00	2.80		53.00
Sub-totals		**161.00**	**796.91**	**2.50**	**57.00**	**142.48**	**1159.89**	**205.27**	**41.04**	**741.45**

Total Acres of Non-Tidal Impacts	**70.34**
Total Mitigation Liability	**132.69**
Total Proposed Credits	**246.31**
Percent of Wetland Acreage Replacement	**228.9**

LP - Pending finalization of land protection	I - Restoration/Enhancement/Creation activities in progress
P - Planning / permitting	M - Mitigation monitoring
D - Pending delineation / assessment	CA - Corrective actions necessary
C - Closed	PC - Pending project closure

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Table 15: Tidal Wetland Project Summary for the Lower James River Basin								
Project Information		Tidal Marsh	SAV	Oyster	Tidal	Tidal	Mitigation Acres	Proposed Credits
Project ID	Status	Rest	Rest	Rest	Enh	Pres		
LJ-3	C	0.00	0.00	0.34	0.00	0.00	0.34	0.07
LJ-8	C	0.00	0.00	0.00	0.00	11.94	11.94	1.00
LJ-10	P, LP	20.00	0.00	0.00	0.00	0.00	20.00	20.00
Acre Sub-totals		**20.00**	**0.00**	**0.34**	**0.00**	**11.94**	**32.28**	**21.07**
Credit Sub-totals		**20.00**	**0.00**	**0.07**	**0.00**	**1.00**		
Total Acres of Tidal Impacts					**0.43**			
Total Mitigation Liability					**0.43**			
Total Proposed Credits					**21.07**			
Percent of Wetland Acreage Replacement					**4,651.16**			

LP - Pending finalization of land protection
P - Planning / permitting
D - Pending delineation / assessment
C - Closed

I - Restoration/Enhancement/Creation activities in progress
M - Mitigation monitoring
CA - Corrective actions necessary
PC - Pending project closure

As noted in Section II, the Fund has been used to mitigate for 22,765 linear feet of permitted stream impacts in the Lower James River Basin through 2009. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Lower James River Basin. Through 2009, all stream projects have been funded with pre-USM funds.

Table 16: Stream Project Summary for the Lower James River Basin					
Project ID	**Project Status**	**Stream Mitigation Area (ac)**	**Channel Length in Mitigation Area (lf)**	**Mitigation Activity Description**	**Additional Protected Acreage (ac)**
LJ-2	C	0.04	104	Stabilized a headcut with a series of step pools serving as grade control within an unnamed tributary to Upham Brook. Stream banks were shaped along 104 lf of channel to provide additional floodplain area.	0
LJ-9	LP, P	3.2	967	Priority 1 relocation of 967 lf of an unnamed tributary to Chisel Run. The relocated channel buffered by an existing mature forest ranging from 50 to 260 feet along each bank.	0
LJ-10*	P, LP	86	10,950	Removal of a dam on Lake Charles fed by several tributary streams, primarily Kimages Creek. Restoration will be accomplished through the removal of a portion of the existing dam where it intersects the preexisting stream channel and the planting of the wetlands created by this dam breach.	Reported under non-tidal wetland summary
LJ-12*	LP	29.5	6,720	Two hundred foot buffers will be preserved on both wetland and stream systems along the James River, two unnamed tributaries that flow directly into the James River, and 15 acres of PFO wetlands.	Reported under non-tidal wetland summary
	Totals	**118.74**	**18,741**		**0**
Total Impacts (lf)		**22,765.00**			

ac - acre lf - linear feet

LP - Pending finalization of land protection

P - Planning / permitting

D - Pending delineation / assessment

C - Closed

I - Restoration/Enhancement/Creation activities in progress

M - Mitigation monitoring

CA - Corrective actions necessary

PC - Pending project closure

*Project includes wetland mitigation

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping")

Table 17: Closed Projects for the Lower James River Basin							
Project ID	**Corps Approval Date**	**Corps Closure Date**	**Amount Approved ($)**	**Amount Unallocated ($)**	**Non-Tidal Wetland Credits**	**Tidal Wetland Credits**	**Stream Restoration**
LJ-2	9/10/2001	7/27/2007	15,000	0	0	0	104
LJ-3	7/12/2002	7/27/2007	50,650	0	0	0.07	0
LJ-5	5/30/2003	7/27/2007	2,500	1,000	0	0	0
LJ-6	12/14/2004	7/5/2008	149,500	93,043	7.95	0	0
LJ-8	12/15/2006	2/17/2009	49,786	0	30.72	1	0
		Totals	**$267,436.00**	**$94,043.00**	**39**	**1**	**104**

Project Summaries

The following section provides a summary of each project located within the Lower James River Basin for which the Corps has authorized funds through 2009. The summaries include a description of the mitigation activities; partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Details of projects approved before 2009 may be found in previous reports as indicated.

LJ-1 Chickahominy River (Walters)

Please reference the 2007 Annual Report for additional background information about this project.

The purpose of this project is to conduct non-tidal wetland restoration and upland buffer restoration and non-tidal wetland and upland buffer preservation at the Chickahominy River (Walters) property near Midlothian. The objectives of this project are to restore 20 acres of forested wetland and restore 23 acres of upland buffer in addition to preservation of 198 acres of wetland and 32.8 acres of upland.

Investigations of soils, hydrology and vegetation in the wetland restoration areas at the property demonstrate that a forested wetland community is becoming established. The 2008 hydrological monitoring of the site showed wetland hydrology was present in all the wells that were able to be sampled, although a majority of the wells were not able to be read in 2008. Hydrological monitoring during the 2009 growing season also showed hydrologic conditions favorable to wetlands development. Of the seven wells deployed in 2009, four exhibited saturation in the upper part of the soil for greater than 12.5% of the growing season, while the remaining three failed. Considerable natural colonization by volunteer woody species has been confirmed during previous monitoring events. Density of seedlings estimated in vegetation plots exceeds 400 stems per acre with most abundant species including red maple, sweet gum, bald cypress and willow oak. Assessment of herbaceous cover in randomly located subplots indicated a predominance of hydrophytic vegetation. Invasive woody species observed on the project site during previous monitoring events in 2003 and 2004 include tree of heaven and multiflora rose. Efforts have been taken to identify and control the occurrence and distribution of these species, including hand cutting and spraying with herbicide. This corrective action has largely contained the woody invasive problem, but small areas of Tree of heaven and Multiflora rose still persist. Additionally, previous monitoring effors

have documented occurrences of Japanese honeysuckle (*Lonicera japonica*) in upland portions of the site and at field edges. The Conservancy will continue to monitor the status of the invasives on the property and will implement corrective action if necessary. This is the eighth year post construction and mitigation monitoring is scheduled through 2011 with reports submitted to the Corps.

LJ-2 Chickahominy River (Cheswick Park)
This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

LJ-3 VMRC Oyster Reef
This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

CH-9/LJ-4 Northwest River (Stephens)
The Stephens property (detailed under the Chowan River Basin) is also included as part of Lower James River Basin due to the split drainage.

LJ-5 Isle of Wight Site
This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

LJ-6 Chickahominy River (Rogers-Chenault)
This project was officially closed in 2008. Please reference the 2008 Annual Report for details on this project.

LJ-7 Great Dismal Swamp Northwest Section (Jacobson et al.)
Please refer to the 2007 Annual Report for additional background information about this project.

The purpose of this project is to conduct non-tidal wetland restoration, enhancement and upland buffer restoration and non-tidal wetland and upland buffer preservation at this 84-acre property in Chesapeake. The property contains approximately 54 acres of cropland, 22 acres of forested wetlands and several acres of drained forested wetland and upland forest. In the past a ditch system was installed on this site to lower the ground water table to make farming more successful.

A shallow groundwater table study was conducted at the site during the 2007 growing season. A preliminary design was completed in 2009 and was presented to the City for review. Additional coordination is required and will be ongoing in 2010. The Conservancy anticipates that the mitigation plan will be completed in 2010. Following the completion of the plan, the Conservancy will submit a third request for funding to the Corps to complete the mitigation activities. The Conservancy anticipates that implementation of the mitigation plan will also be completed in 2010.

LJ-8 Lower Chickahominy River (Church Point Farm, LLC)
Please refer to the 2007 Annual Report for additional details on this project.

The purpose of this project is to conduct non-tidal wetland and upland buffer preservation at the Church Point Farm property in Charles City County.

A remote delineation of surface waters and wetlands based on the field verification of existing NWI maps, using topographic and soils maps of the property as supporting data, was conducted by Conservancy staff on December 2, 2008 and submitted to the Corps on January 8, 2009. The property is 944.3 acres with 428 acres in the mitigation area including 368.61 acres of non-tidal wetland, 11.94 acres of tidal wetland and 47.3 acres of upland buffer preservation. The Conservancy requested official closure of this project in 2009. The project was officially closed via a letter from the Army Corps of Engineers dated February 17, 2009. All allocated funds for this project were spent on these mitigation activities.

LJ-9 James River site
Please refer to the 2007 Annual Report for additional background information on this project.

The purpose of this project is to conduct stream restoration activities at a property in James City County (JCC). Negotiations have terminated and the Conservancy will request closure of this project in 2010.

LJ-10 James River site #2
Please refer to the 2008 Annual Report for additional background information on this project.

The purpose of this project is to provide restoration of the natural stream channel and wetland habitats resulting from the removal of the dam at the mouth of Kimages Creek on the VCU Rice Center property. The property is located along the James River in Charles City County.

Restoration of the site will be accomplished through the removal of a portion of the existing dam where it intersects the preexisting stream channel and the planting of the wetlands created by this dam breach. Additional wetlands may exist or be created in areas above the influence of daily lunar tides that receive adequate hydrology. It is expected that approximately 20.0 acres will be subject to tidal influence and 50.0 acres will be restored to non-tidal wetlands.

The Conservancy anticipates completing the restoration of this site in 2010.

LJ-11 Chickahominy River site
The purpose of this project is to conduct a non-tidal wetland and stream preservation project on two adjacent properties in Henrico and New Kent Counties along the Chickahominy River in Virginia. The project will provide approximately 305 acres of preservation, and include 140 acres of non-tidal wetlands and 11,800 linear feet of

stream. The site is located downstream of LJ-1 (restoration) and upstream of LJ-6 (preservation). The funding for an appraisal of the two properties to determine fair market value of the easements was approved by the Corps on August 28, 2008. The appraisal will be completed in 2010 and used to negotiate the purchase of the conservation easements. The Conservancy anticipates a second request to the Fund to complete this acquisition in 2010.

LJ-12 James River site #3
Please refer to the 2008 Annual Reports for details on this project.

The purpose of this project is to conduct a stream, wetland and riparian buffer preservation project at Blair's Wharf on the James River, in Prince George County, Virginia.

The property provides approximately 6,720 linear feet of high quality vegetated riparian buffer along the James River (3,365 feet) and along two unnamed tributaries (3,203 feet and 152 feet) that flow directly into the James River. In addition, there are approximately 15 acres of PFO wetlands on the property. Two-hundred-foot buffers will be established and credited for both wetland and stream systems. Nearly 30 acres will be protected as stream mitigation acreage and over 40 acres will be protected as wetland and wetland buffer mitigation acreage.

The Conservancy anticipates that the US Fish and Wildlife Service will complete the purchase of the property in 2010. A confirmation by the Army Corps of Engineers of a delineation of the site to determine mitigation credits will also be completed in 2010. The Conservancy anticipates requesting official closure of the site in 2010.

Middle James River Basin

The Middle James River Basin is comprised of four HUCs (02080203, 02080204, 02080205 and 02080207) encompassing the portion of the James River from the Blue Ridge Parkway east to Richmond. This basin is located within the Conservancy's Piedmont Ecoregion. Conservation targets include small, Piedmont streams and tributaries, James spinymussel, isolated wetlands, and working and old growth forests.

The projects discussed in this section serve as mitigation for permitted impacts within the Middle James River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2009 are listed on the below tables. One new project was approved in 2009. Complete project descriptions for projects approved prior to 2009 may be found in earlier reports as indicated below. Updates for 2009 are given for each project as applicable. Complete descriptions of projects approved during 2009 are provided below.

The following table provides a summary of projects for which funds were approved in the Middle James River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

Table 18: Approved Project Summary for the Middle James River Basin						
Project ID	Project Name	Purpose of Proposal	Corps Approval Date	Funds Authorized		
				Non-Tidal Wetland Projects ($)	Tidal Wetland Projects ($)	Stream Projects ($)
MJ-1	Rivanna River (Lamb)	M	4/10/2001	366,450	0	0
		M	10/20/2003	0	0	385,000
		M	11/19/2007	0	0	336,550
MJ-2*	Rivanna Watershed site	A	9/2/2005	0	0	1,500
MJ-3	Beaumont (Sisters of the Blessed Sacrament)	A	4/23/2006	3,750	0	3,750
		M	12/15/2006	110,500	0	110,500
		BS	12/19/2006	12,500	0	12,500
MJ-4	Southern Shenandoah (Bennett)	M	8/10/2007	0	0	12,608
MJ-5	Rivanna Watershed (Meadow Creek site 1)	M	11/16/2007	0	0	9,994
MJ-6	Rivanna Watershed (Meadow Creek site 2)	M	11/16/2007	0	0	1,341,562
MJ-7	Rivanna Watershed (Meadow Creek site 3)	M	11/16/2007	0	0	1,215,737
MJ-8	Rivanna Watershed (Meadow Creek site 4)	M	11/16/2007	0	0	625,622
MJ-9*	Southern Shenandoah site	M	2/8/2008	0	0	40,807
MJ-10	Rivanna Watershed (Meadow Creek Area 3)	M	12/16/2008	0	0	490,975
MJ-11	Rivanna Watershed (Meadow Creek Area 4)	M	12/21/2009	0	0	255,775
			Totals	**493,200**	**0**	**4,842,880**
			Grand Total	**5,336,080**		

*Project is no longer pursued due to landowner constraints or the results of feasibility studies

M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey

The following table summarizes the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal wetland project pursued by

the Conservancy to serve as mitigation for impacts in the Middle James River Basin. In addition, the table provides the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 19: Non-Tidal Wetland Project Summary for the Middle James River Basin

Project Information		NT Wetland (Ac)			Upland (Ac)		Mitigation Acres	Proposed Credits	Completed Credits	Additional Protected Acres (ac)
Project ID	Status	Rest/ Cr	Pres	Enh	Rest	Pres				
*MJ-1	M, CA	20.00			26.00		46.00	21.73		44.32
*MJ-3	C		87.12			12.50	99.62	-	9.00	470.00
Sub-totals		**20.00**	**87.12**	**0.00**	**26.00**	**12.50**	**145.62**	**21.73**	**9.00**	**514.32**
Total Acres of Non-Tidal Impacts					**20.16**					
Total Mitigation Liability					**37.09**					
Total Proposed/Completed Credits					**30.73**					
Percent of Wetland Acreage Replacement					**99.8**					

LP - Pending finalization of land protection
P - Planning / permitting
D - Pending delineation / assessment
C – Closed
I - Restoration/Enhancement/Creation activities in progress
M - Mitigation monitoring
CA - Corrective actions necessary
PC - Pending project closure

*Project includes stream or tidal wetland mitigation

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

As noted in Section II, the Fund has been used to mitigate for 29,312 linear feet of permitted stream impacts in the Middle James River Basin through 2009. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Middle James River Basin. This table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 20: Pre-USM Stream Project Summary for the Middle James River Basin					
Project ID	**Project Status**	**Stream Mitigation Area (ac)**	**Channel Length in Mitigation Area (lf)**	**Mitigation Activity Description**	**Additional Protected Acreage (ac)**
MJ-1*	M, CA	64.18	9,239	Priority 1 relocation of 1,866 lf of an unnamed tributary and bank shaping to provide floodplain area along 1,373 lf of a second unnamed tributary to the North Fork of the Rivanna River. Each bank of both tributaries planted with a 200 foot wide wooded buffer. Riparian buffer planting (250 feet wide) along a total of 6,000 lf of the North Fork (right bank) and South Fork (left bank) of the Rivanna River.	Reported under the wetlands summary
MJ-3*	C	434	36,907	Riparian buffer preservation of 8,280 lf along the right bank of the James River with an existing mature wooded buffer ranging from 100 to 300 feet. Stream system preservation of 12,200 lf of Deep Creek, with an existing mature wooded buffer 300 feet wide along each bank (except for a 50 foot wide buffer along the left bank for 2,500 lf). Stream system preservation of 9,420 lf of headwater tributaries to the James River with an existing mature wooded buffer of 200 feet along each bank. Stream system preservation of 7,920 lf of a headwater tributary to the James River with an existing mature wooded buffer of 300 feet along each bank.	Reported under the wetlands summary
MJ-4	C	20	5,280	Riparian buffer preservation along 1,009 lf of the left bank of the Moorman's River with an existing mature wooded buffer width of 100 feet. Stream system preservation along both banks of 3,254 lf of Slate Branch and tributaries with an existing mature wooded buffer width of 100 feet. Riparian buffer preservation along 1,017 lf of the right bank of Slate Branch with an existing mature wooded buffer width of 100 feet.	59
MJ-5	LP, P	12.5	N/A	Provides mature riparian buffer preservation adjacent to the MJ-7 project site.	
MJ-6	LP, P	28.1	3,185	Stream channel restoration, bank stabilization, and riparian buffer enhancement along 3,185 lf of Meadow Creek.	
MJ-7	LP, P	17	2,497	Stream channel restoration, bank stabilization and riparian buffer enhancement along 2,497 lf of Meadow Creek.	
MJ-8	LP, P	5	1,270	Stream channel restoration, bank stabilization and riparian buffer enhancement along 1,270 lf of Meadow Creek.	

MJ-10	LP. P	8.6	1,500	Stream and buffer enhancement and buffer preservation on 1,500 linear feet of Meadow Creek.	
MJ-11+	LP, P	0.99	180	Stream channel restoration, bank stabilization, and riparian buffer preservation along 600 lf of Meadow Creek.	
	Totals	**590.37**	**60,058**		**59**
Total Impacts (lf)		**28,735**			

ac - acre lf - linear feet

LP - Pending finalization of land protection

I - Restoration/Enhancement/Creation activities in progress

P - Planning / permitting

M - Mitigation monitoring

D - Pending delineation / assessment

CA - Corrective actions necessary

C - Closed

PC - Pending project closure

*Project includes wetland mitigation

+Project includes pre-USM and USM funding

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping")

The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each project pursued by the Conservancy to serve as mitigation for impacts under the USM in the Middle James River Basin. This table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 21: USM Stream Project Summary for the Middle James River Basin

Project Information		Stream Activity (lf)			Upland Buffer (Ac)		Mitigation (ac)	Additional Protected (ac)	Proposed Credits
Project ID	**Status**	**Rest /Enh**	**Pres**	**Livestock**	**Rest**	**Pres**			
MJ-11+	LP, P	420	0	0	0	2.31	2.31	0	475
Totals		**420**	**0**	**0**	**0**	**2.31**	**2.31**	**0**	**475**
Total Linear Feet of Impacts (lf)					**577**				
Total Compensation Required (TCR)					**446.00**				
Total Proposed Credits (CC)					**475**				

LP - Pending finalization of land protection

I - Restoration/Enhancement/Creation activities in progress

P - Planning / permitting

M - Mitigation monitoring

D - Pending delineation / assessment

CA - Corrective actions necessary

C – Closed

PC - Pending project closure

*Project includes pre-USM and USM funding

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the programwhich does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Table 22: Closed Projects Summary for the Middle James River Basin								
Project ID	Corps Approval Date	Corps Closure Date	Amount Approved ($)	Amount Unallocated ($)	Non-Tidal Wetland Credits	Tidal Wetland Credits	Stream Activity	
							Buffer Preservation (lf)	Livestock Exclusion (lf)
MJ-2	9/2/2005	7/27/2007	1,500	0	0	0	0	0
MJ-3	4/23/2006, 12/15/2006, 12/19/2006	12/21/2009	253,500	20,840.00	9	0	36,907	0
MJ-4	8/10/2007	12/21/2009	12,608	470.03	0	0	5,280	0
MJ-9	2/8/2008	3/16/2009	40,807	40,807.00	0	0	0	0
		Totals	**$308,415.00**	**$62,117.03**	**9**	**0**	**42,187**	**0**

Project Summaries

The following section provides a summary of each project located within the Middle James River Basin for which the Corps has authorized funds through 2009. The summaries include a description of the mitigation activities; partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Details of projects approved before 2009 may be found in earlier reports as indicated below.

MJ-1 Rivanna River (Lamb)

Please reference the 2007 and 2008 Annual Reports for details on this project.

The purpose of this project is to conduct non-tidal wetland and upland buffer restoration, stream restoration and enhancement, and riparian buffer planting activities at the Lamb property (also known as the Forks of the Rivanna project) in Albemarle County.

The objective of the wetland portion of this project was to restore a mixture of emergent and forested wetlands (20 acres) and an upland buffer (26 acres). Wetland restoration activities were conducted in 2005. A forested buffer was planted along the wetlands and 6,000 linear feet of the North Fork and South Fork of the Rivanna River in 2003. Stream restoration and enhancement activities were completed in 2005 and included the Priority 1 relocation of 1,866 linear feet of an unnamed tributary to the North Fork of the Rivanna River and bank shaping and installation of in-stream structures on 1,373 linear feet of a second tributary. Planting of live stakes along both tributaries was completed in March 2006.

Success of the 2003 buffer planting was greatly impacted by the invasive species Johnson grass *(Sorghum halepense)*. Johnson grass gained dominance in portions of the upland buffer for the wetland restoration area as well as in other much larger portions of the site and a mechanical/chemical control effort began in 2006 and continued through 2008. The Conservancy planted approximately 21,000 saplings in the 70-acre buffer area along the wetland, tributaries, North Fork, and South Fork of the Rivanna River in spring 2009 to meet success criteria for the site. Continued monitoring and control of the Johnson grass will be conducted and corrective action will be performed if necessary.

In addition, cattails have invaded the restored stream channel and are causing retention of excess fine-grained particles and siltation within pools and riffles. The cattails do not appear to be affecting overall channel stability or habitat at this time; however, in some areas the degree of obstruction in the channel causes less than bankfull flows to leave the channel, potentially compromising the stability of those sections. Since 2006, the Conservancy has implemented efforts to remove cattails from the stream and this will continue until the species is managed. The Conservancy organized two volunteer events to remove cattails from the channel and banks in 2009. The continued growth of the live stakes and the 2009 riparian buffer planting should also help with management of this species.

Wetlands hydrology and vegetation monitoring completed in 2009 indicate further development of an open-water and emergent to forested wetland complex. Precipitation during March, April and May of the 2009 growing season was slightly below normal. Conversely, monthly precipitation amounts were considered normal in June, August, and September, and above normal in July. All four of the functioning wells met or exceeded the 12.5% standard for duration of saturation or inundation. One of the four wells recorded ponding of water above the soil surface for a sustained period. Stem density of woody species averaged 364 stems per acre across fourteen monitoring plots. Monitoring indicated successful establishment of an emergent wetland plant community with average total aerial cover of 75%. Wetland plants, contributed to greater than 50% of the total plant aerial coverage in 11/14 (79%) of the monitoring plots, and herbaceous wetland plant species contributed to an average of 59% of the total aerial cover in all plots. Invasive species observed in the plots consisted of small carpgrass, *Arthraxon hispidus*, Japanese honeysuckle, *Lonicera japonica*, red mulberry, *Morus rubra*, and curly dock, *Rumex crispus*. In addition, cattails have become well-established in the transition zone between open water and emergent wetlands. The Conservancy will continue to monitor the status of the invasives on the wetlands project site and will implement corrective action, as necessary, in 2010. This is the fifth year post construction and mitigation monitoring is scheduled through 2014 with reports submitted to the Corps in 2011 and 2014.

MJ-2 Rivanna Watershed site

This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

MJ-3 Beaumont (Sisters of the Blessed Sacrament)

Please reference the 2007 Annual Report for additional background information on this project.

The purpose of this project is to conduct open water/wetland and associated upland buffer preservation and stream and the associated upland riparian buffer preservation at the Beaumont property (also known as Belmead) located along the James River in Powhatan County.

A delineation of surface waters and wetlands on the property was conducted on October 1, 2008 and confirmed by the Corps on January 29, 2009. The 1,004-acre property contains a total of 87.12 acres of non-tidal wetland preservation and 12.5 acres of

upland wetland buffer preservation, yielding a total of 9 non-tidal wetland credits. The property also contains 36,907 linear feet of stream preservation (including sections of the James River, Deep Creek, and several headwater tributaries) and 434 acres of riparian buffer preservation. The project also provides 470 acres of additional protected acreage. The project was officially closed via a letter from the Corps dated December 21, 2009. The unspent funds of $20,840.00 have been unallocated from this project and returned to the general balance of the Fund.

MJ-4 Southern Shenandoah (Bennett)
Please refer to the 2007 Annual Report for details on this project.

The purpose of this project is to conduct open stream system preservation and associated upland riparian buffer preservation on the Moorman's River and its tributary, Slate Branch (and associated unnamed tributaries) at the Bennett property in Albemarle County.

A delineation of surface waters and wetlands on the property was conducted by Conservancy staff on March 23, 2009 and was confirmed by the Corps on October 19, 2009. The property contains a total of 5,280 linear feet of stream preservation and 19 acres of riparian buffer preservation. The project also provides 60 acres of additional protected acreage. The project was officially closed via a letter from the Army Corps of Engineers dated December 21, 2009. The unspent funds of $470.03 have been unallocated from this project and returned to the general balance of the Fund.

MJ-5 Rivanna Watershed (Meadow Creek site 1)
Please refer to the 2008 Annual Report for additional background information on this project.

The purpose of the MJ-5, MJ-6, MJ-7, MJ-8, MJ-10, and MJ-11 projects is to conduct stream restoration activities on six adjacent sites along Meadow Creek in the City of Charlottesville and Albemarle County. Each site will be placed under easement or protected via deed restrictions to secure the long term protection of each property. The initial funding for MJ-5, MJ-6, MJ-7, and MJ-8 was approved by the Corps on November 16, 2007, initial funding for MJ-10 was approved by the Corps on December 16, 2008, and initial funding for MJ-11 was approved by the Corps on December 21, 2009. MJ-5, MJ-6, MJ-7, MJ-8, and MJ-10 use pre-USM funding; MJ-11 uses both pre-USM and USM funding.

The Conservancy plans to conduct stream restoration, enhancement, and riparian buffer enhancement and preservation along approximately 9,000 linear feet of Meadow Creek. Once the protection methods are completed, the Conservancy will finalize and implement the restoration plan for these sites. Construction is expected to begin in winter 2010.

MJ-6 Rivanna Watershed (Meadow Creek site 2)
Project description is detailed above at MJ-5.

MJ-7 Rivanna Watershed (Meadow Creek site 3)
Project description is detailed above at MJ-5.

MJ-8 Rivanna Watershed (Meadow Creek site 4)
Project description is detailed above at MJ-5.

MJ-9 Southern Shenandoah site
The purpose of this project is to conduct a stream and riparian buffer preservation and riparian buffer enhancement project on a headwater tributary of the Lynch River and North Fork Rivanna River, in Greene County, Virginia. The funding for this project was approved by the Corps on February 8, 2008.

The Conservancy was unable to reach agreeable terms with the landowner and the project was officially closed via a letter from the Corps dated March 16, 2009. No funds were spent for this project; therefore, the entire balance of allocated funds of $40,807.00 will be returned to the general balance of the Fund.

MJ-10 Rivanna Watershed (Area 3)
Project description is detailed above at MJ-5.

MJ-11 Rivanna Watershed (Area 4)
Project description is detailed above at MJ-5.

Upper James River Basin

The Upper James River Basin is comprised of two HUCs (02080201 and 02080202) encompassing the portion of the James River from the West Virginia border east to the Blue Ridge Parkway. This basin is located within the Conservancy's Central Appalachian Ecoregion. Conservation targets include Central Appalachian river systems (with particular interest to the Cowpasture River and the associated tributaries), montane, non-alluvial wetlands, cave invertebrate communities, bats, alluvial forests and grasslands, pine-oak-heath woodlands, and Central Appalachian mixed hardwood forests.

The projects discussed in this section serve as mitigation for permitted impacts within the Upper James River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2009 are listed on the below tables. Through 2009, the Conservancy has requested funds to pursue three mitigation projects in this basin and the Corps has authorized funds for all three projects. Complete project descriptions for projects approved prior to 2009 may be found in earlier reports as indicated below. Updates for 2009 are given for each project as applicable. No new projects were pursued in 2009.

The following table provides a summary of projects for which funds were approved in the Upper James River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

Table 23: Approved Project Summary for the Upper James River Basin

Project ID	Project Name	Purpose of Proposal	Corps Approval Date	Funds Authorized		
				Non-Tidal Wetland Projects ($)	Tidal Wetland Projects ($)	Stream Projects ($)
UJ-1	Warm Springs Mountain / Cowpasture River (Phillips)	AC, F	9/1/06	22,679	0	0
		M	2/22/07	105,320	0	0
UJ-2	Warm Springs Mountain / Cowpasture River Site	M	12/7/06	0	0	149,009
SH-3 / UJ-3	Laure Fork (Rifle Ridge Farm, LLC)	M	11/19/07	0	0	0
			Totals	**127,999**	**0**	**149,009**
			Grand Total	**277,008**		

The following table summarizes the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Upper James River Basin. In addition, the table provides the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The table does not include projects for which funding was approved for initial expenditures

such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 24: Non-Tidal Wetland Project Summary for the Upper James River Basin

Project Information		NT Wetland (Ac)			Upland (Ac)		Mitigation Acres	Proposed Credits	Additional Protected Acreage (ac)
Project ID	Status	Rest/ Cr	Pres	Enh	Rest	Pres			
UJ-1	M	3.09	0.05	1.78	3.91	5.16	13.99	4.21	0.00
Sub-totals		**3.09**	**0.05**	**1.78**	**3.91**	**5.16**	**13.99**	**4.21**	**0.00**
Total Acres of Non-Tidal Impacts					**3.10**				
Total Mitigation Liability					**5.08**				
Total Proposed Credits					**4.21**				
Percent of Wetland Acreage Replacement					**99.7**				

LP - Pending finalization of land protection
P - Planning / permitting
D - Pending delineation / assessment
C – Closed
I - Restoration/Enhancement/Creation activities in progress
M - Mitigation monitoring
CA - Corrective actions necessary
PC - Pending project closure

*Project includes stream or tidal wetland mitigation

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

As noted in Section II, the Fund has not been used to mitigate for any permitted stream impacts in the Upper James River Basin through 2009. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for the stream project pursued by the Conservancy to serve as mitigation for future impacts in the Upper James River Basin.

Table 25: Stream Project Summary for the Upper James River Basin					
Project ID	**Project Status**	**Stream Mitigation Area (ac)**	**Channel Length in Mitigation Area (lf)**	**Mitigation Activity Description**	**Additional Protected Acreage (ac)**
SH-3/ UJ-3	C	104.4	7,609	Stream and riparian buffer preservation in the Shenandoah River Basin of 12,894 lf along both banks of Laurel Fork with a buffer ranging from 100-2,000 ft, 7,960 lf along both banks of Barkley Run with buffer widths ranging from 100-900 ft, 2,692 lf along one bank of Schoolhouse Run with buffer widths along the right bank of 100 feet and left bank of 35-100 ft, 2,569 lf along the left bank of Collins Run with a buffer width of 100 ft, and 6,108 lf along both banks of Blights Run with buffer widths on the right bank of 20-100 ft and left bank of 100 ft. Stream and riparian buffer preservation in the Upper James River Basin of 7,609 lf along both banks of Backs Creek and its tributaries with buffer width limited to the property boundary up to 100 ft.	reported under SH-3
	Totals	**104.4**	**7,609**		
Total Impacts (lf)		**0**			

ac - acre lf - linear feet

LP - Pending finalization of land protection

P - Planning / permitting

D - Pending delineation / assessment

C - Closed

I - Restoration/Enhancement/Creation activities in progress

M - Mitigation monitoring

CA - Corrective actions necessary

PC - Pending project closure

*Project includes wetland mitigation

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping")

Table 26: Closed project Summary for the Upper James River Basin								
							Stream Activity	
Project ID	**Corps Approval Date**	**Corps Closure Date**	**Amount Approved ($)**	**Amount Unallocated ($)**	**Non-Tidal Wetland Credits**	**Tidal Wetland Credits**	**Buffer Preservation (lf)**	**Livestock Exclusion (lf)**
UJ-2	12/7/2006	7/10/2007	149,009	149,009	0	0	0	0
UJ-3	11/19/2007	12/21/2009	0	0	0	0	7,609	0
		Totals	**149,009**	**149,009**	**0**	**0**	**7,609**	**0**

Project Summaries
The following section provides a summary of each project located within the Upper James River Basin for which the Corps has authorized funds through 2009. The summaries include a description of the mitigation activities; partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Details of projects approved before 2009 may be found in earlier reports as indicated.

UJ-1 Warm Springs Mountain/Cowpasture River (Phillips)
Please reference the 2008 Annual Report for additional background information on this project.

The purpose of this project is to conduct non-tidal wetland restoration and creation and upland buffer restoration at the Phillips property in Bath County. The restoration of the site was completed in the spring of 2008. The site design included the restoration of 3.09 acres of non-tidal wetlands, the enhancement of 1.78 acres of non-tidal wetlands and the restoration of 3.91 acres of upland forested buffer.

Wetlands restoration and creation is supported by groundwater seeps located in a former pasture. The first year of mitigation monitoring of the wetland hydrology and vegetation was conducted in 2009. Monitoring indicated that the success criteria for wetlands hydrology was met in 3/4 (75%) of the continuous groundwater monitoring wells. Vegetation monitoring indicated successful establishment of an emergent wetland plant community with average total aerial cover of 114% measured in eight monitoring plots located within the wetlands restoration/enhancement area. Wetland plants contributed to greater than 50% of the total plant aerial coverage in 7/8 (88%) of the monitoring plots. Herbaceous wetland plant species contributed to an average of 72% of the total aerial cover in all plots. Wetland plants contributed to greater than 50% of the dominant herbaceous vegetation, as measured by relative aerial cover, in 6/8 (75%) of the monitoring plots. However, no wetland woody stem species planted in March of 2008 were observed in the monitoring plots. Similarly, stem density of woody species was low, ranging from 0 to 262 stems per acre and averaging 73 stems per acre across the site. Frequency of woody species occurrence was greatest for swamp rose, *Rosa palustris,* and eastern red cedar, *Juniperus virginiana*. The general lack of observed woody stem density is possible due to aggressive development of the herbaceous vegetative community, and herbivory. Additional sampling of the vegetative community located in the wetlands restoration area is deemed necessary and scheduled for the 2010 growing season, the second full growing season since plant establishment. Corrective action, including replanting with wetland woody species is planned for 2010, in order to ensure the success criteria of 400 stems per acre is met by the third growing season. Mitigation monitoring is scheduled through 2018, with reports submitted to the Corps in 2010, 2011, 2013, 2015, and 2018.

UJ-2 Warm Springs Mountain/Cowpasture River Site
This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

SH-3 / UJ-3 Laurel Fork (Rifle Ridge Farm, LLC)

This project mitigates for stream impacts in both the Shenandoah and Upper James River Basins. Projects details are given under the SH-3 description.

New River Basin

The New River Basin is comprised of two HUCs (05050001 and 05050002). This basin is located within the Conservancy's Central Appalachian Ecoregion. Conservation targets include small, Central Appalachian streams and tributaries and general locations encompassing habitat for known Virginia Department of Conservation and Recreation Natural Heritage elements.

The Fund has been used to mitigate for 1.02 acres of non-tidal wetland impacts and 3,078 linear feet of stream impacts in the New River Basin. Through 2009, the Conservancy has not requested funds to pursue any mitigation project in this basin. Several projects have been identified and are expected to be developed into funding proposals in 2010.

Potomac River Basin

The Potomac River Basin is comprised of three HUCs (02070008, 02070010, and 02070011) encompassing the Lower Potomac east of the Blue Ridge to the Bay. This basin is located within the Conservancy's Piedmont Ecoregion. Conservation targets include small Piedmont streams and tributaries, sportfish and nongame fish populations, and estuarine and riverine systems.

The projects discussed in this section serve as mitigation for permitted impacts within the Potomac River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2009 are listed on the below tables. Complete project descriptions for projects approved prior to 2009 may be found in earlier reports as indicated below. Updates for 2009 are given for each project as applicable. No new projects were pursued in 2009, though additional funding for one project was approved.

The following table provides a summary of projects for which funds were approved in the Potomac River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

Table 27: Approved Project Summary for the Potomac River Basin

Project ID	Project Name	Purpose of Proposal	Corps Approval Date	Funds Authorized		
				Non-Tidal Wetland Projects ($)	Tidal Wetland Projects ($)	Stream Projects ($)
PO-1	Caledon (Nash)	M	5/23/2001	175,000	0	0
		M	12/19/2003	0	0	60,800
PO-2	Dogue Creek (Kingstowne)	M	2/22/2007	0	0	12,000
			10/6/2006	0	0	1,222,000
PO-3	Goose Creek Site	M	12/7/2006	0	0	1,406,703
PO-4	Goose Creek Site	A	10/11/2006	3,250	0	3,250
			1/12/2007	750	0	750
PO-5	Goose Creek (Bluewildlife, LLC)	M	7/27/2007	256,820	0	1,644,752
			2/17/2009			24,725.00
PO-6	Crow's Nest (Stafford Lakes Partnership, Phase I)	M	2/8/2008	800,000	38,000	2,262,000
PO-7	Crow's Nest Phase II	M	2/8/2008	0	0	1,400,000
			Totals	**1,235,820**	**38,000**	**8,036,980**
			Grand Total	**9,310,800**		

M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey

The following tables summarize the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal and tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Potomac River Basin. In addition, the tables provide the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 28: Non-Tidal Wetland Project Summary for the Potomac River Basin

Project Information		NT Wetland (Ac)			Upland (Ac)		Mitigation Acres	Proposed Credits	Completed Credits
Project ID	Status	Rest/ Cr	Pres	Enh	Rest	Pres			
*PO-1	M,D,CA	10	50	0	26.38	66.38	152.76	20.08	N/A
*PO-5	M	4.71	0	1.41	0	0	6.12	5.17	N/A
*PO-6	C	0	385	0	0	144	529.00	-	39.28
*PO-7	C	0	60	0	0	49.28	109.28	-	7.44
Sub-totals		**14.71**	**495.00**	**1.41**	**26.38**	**259.66**	**797.16**	**25.25**	**46.72**
Total Acres of Non-Tidal Impacts					**7.86**				
Total Mitigation Liability					**12.39**				
Total Proposed Credits					**71.97**				
Percent of Wetland Acreage Replacement					**187.2**				

LP - Pending finalization of land protection
P - Planning / permitting
D - Pending delineation / assessment
C - Closed
I - Restoration/Enhancement/Creation activities in progress
M - Mitigation monitoring
CA - Corrective actions necessary
PC - Pending project closure

*Project includes stream or tidal wetland mitigation

Table 29: Tidal Wetland Project Summary for the Potomac River Basin

Project Information		Tidal Wetland (Ac)			Upland (Ac)		Mitigation Acres	Completed Credits
Project ID	Status	Rest/ Cr	Pres	Enh	Rest	Pres		
*PO-6	C	0	108	0	0	0	108	8.96
*PO-7	C	0	9	0	0	0	9	0.75
Sub-totals		**0**	**117**	**0**	**0**	**0**	**117**	**9.71**
Total Acres of Tidal Impacts					**0.11**			
Total Mitigation Liability					**0.11**			
Total Proposed/Completed Credits					**9.71**			
Percent of Wetland Acreage Replacement					**0.0**			

LP - Pending finalization of land protection
P - Planning / permitting
D - Pending delineation / assessment
C - Closed
I - Restoration/Enhancement/Creation activities in progress
M - Mitigation monitoring
CA - Corrective actions necessary
PC - Pending project closure

*Project includes stream or tidal wetland mitigation

As noted in Section II, the Fund has been used to mitigate for 76,495 linear feet of permitted stream impacts both prior to and under the USM in the Potomac River Basin through 2009. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Potomac River Basin. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development. All stream projects initiated through 2009 have been with funds accrued prior to implementation of the USM.

Table 30: Stream Project Summary for the Potomac River Basin					
Project ID	**Project Status**	**Stream Mitigation Area (ac)**	**Channel Length in Mitigation Area (lf)**	**Mitigation Activity Description**	**Additional Protected Acreage (ac)**
PO-1*	M	7.24	1,600	Priority 1 relocation of 300 lf and Priority 2 restoration of 650 lf of an unnamed tributary to Chotank Creek with an existing mature wooded buffer ranging from 50 to over 200 feet along each bank. Livestock exclusion fencing installed to protect 1,600 lf of stream channel and a small pond.	0
PO-2	D, P	5.3	2,500	Priority 1 relocation of 2,300 lf and Priority 2 restoration of 200 lf along two unnamed tributaries to Dogue Creek. The channels buffered by an existing mature forest (with several small areas of buffer enhancement) ranging from 50 to 150 feet along each bank.	0
PO-3	LP, D, P	28	6,877	Channel restoration and enhancement activities along 6,877 lf of several unnamed tributaries to Crooked Run. In addition to channel work, riparian buffer planting 100 feet wide along 5,182 lf of both banks, except for an 80 foot wide buffer along the right bank for 1,118 lf and a 20 foot wide buffer along the left bank for 146 lf. Riparian buffer planting 80 feet wide along a single bank for 1,695 lf (other bank is off property). Livestock exclusion fencing installed to protect 6,877 lf of channel.	0
PO-5	M	22.55	7,243	Channel restoration/enhancement and riparian buffer restoration activities along 4,712 lf of Bolling Branch and 2.531 lf of four unnamed tributaries. In addition, stream and buffer preservation along 100 lf of an unnamed tributary.	77
PO-6	C	306	79,445	Stream system preservation along both banks of 53,175 lf of twelve unnamed tributaries to Accokeek and Potomac Creeks with an existing mature wooded buffer. Riparian buffer preservation along 26,270 lf of one bank of Accokeek and Potomac Creeks with an existing mature wooded buffer.	737
PO-7	C	237.99	30,797	Stream system preservation along both banks of 22,862.54 lf of five unnamed tributaries to Accokeek and Potomac Creeks with an existing mature wooded buffer. Riparian buffer preservation along 7,934 lf of one bank of Potomac Creeks with an existing mature wooded buffer.	745.5
	Totals	**607.08**	**128,462**		**1,560**
Total Impacts		**76,495 lf**			

ac – acre
LP - Pending finalization of land protection
P - Planning / permitting
D - Pending delineation / assessment
C – Closed
lf - linear feet
I - Restoration/Enhancement/Creation activities in progress
M - Mitigation monitoring
CA - Corrective actions necessary
PC - Pending project closure
*Project includes wetland mitigation
Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture). Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping")

Table 31: Closed Project Summary for the Potomac River Basin								
							Stream Activity	
Project ID	Corps Approval Date	Corps Closure Date	Amount Approved ($)	Amount Unallocated ($)	Non-Tidal Wetland Credits	Tidal Wetland Credits	Buffer Preservation (lf)	Livestock Exclusion (lf)
PO-4	10/10/2006	11/16/2007	8,000	0	0	0	0	0
PO-6	2/8/2008	3/16/2009	3,100,000	0	39.28	8.96	79,445	0
PO-7	2/8/2008	12/22/2009	1,400,000	974.98	7.44	0.75	30797	0
		Totals	**4,508,000**	**974.98**	**46.7**	**9.7**	**110,242**	**0**

Project Summaries

The following section provides a summary of each project located within the Potomac River Basin for which the Corps has authorized funds through 2009. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Details of projects approved before 2009 may be found in earlier reports as indicated below.

PO-1 Caledon (Nash)

Please reference the 2008 Annual Report for additional background information on this project.

The purpose of this project is to conduct non-tidal wetland restoration and preservation, upland buffer restoration and preservation, stream restoration, and livestock exclusion activities at the Nash property in King George County. The Conservancy proposed to reverse the existing ditching effects and restore the forest cover in the pastureland at the property and to restore the proper dimension, pattern, and profile to the degraded segment of an unnamed tributary to Chotank Creek.

The goal of the wetland mitigation activities is to restore the livestock pasture area to a mixture of forested wetlands (10 acres) and upland buffer (26 acres) and to preserve approximately 50 acres of forested wetland 66 acres of upland. Restoration work was completed in 2003 and the site was planted in 2004. Results from hydrological monitoring in 2008 indicate that the site is experiencing saturation and inundation sufficient to meet hydrology standards; however, some of the hydrology monitoring wells for the site could not be read. The Conservancy replaced/repaired any non-functioning wells and collected hydrology data during the 2009 growing season to augment the 2008 hydrology data. All six monitoring wells exhibited continuous saturation or inundation in the upper part of the soil for greater than 12.5% of the 2009 growing season. 2008 vegetation monitoring data indicated that weed species such as blackberry (Rubus spp.), multiflora rose (*Rosa multiflora*), Nepalese browntop (*Microstegium vimineum*) and soft needle rush (*Juncus effusus*) are present on the site. The Conservancy will monitor these potentially problematic species and will implement corrective action if it is needed. Vegetation monitoring data obtained in 2008 showed woody stem density values below the 400 stems per acre criterion in 40% of the vegetation plots. However, plots in close proximity to woody species seed sources generally exhibited moderate colonization by volunteer species including loblolly pine (*Pinus taeda*), sweetgum (*Liquidambar styraciflua*), and sycamore (*Platanus*

occidentalis). An assessment of woody species stem density in early 2010 showed continued moderate colonization of the site by these species. However, portions of the site generally located in the center of former pasture areas may continue to exhibit low stem densities. The Conservancy will monitor the project site in 2010, and evaluate the need for replanting of poorly colonized portions of the site. 2010 will be the seventh year post construction and wetland mitigation monitoring is scheduled through 2013 with reports submitted to the Corps in 2010 and 2013.

The stream portion of this project was closed in 2007. Please reference the 2007 Annual Report for details on this project.

PO-2 Dogue Creek (Kingstowne)
Please reference the 2007 Annual Report for additional background information on this project.

The purpose of this project is to conduct stream restoration activities at a property in Fairfax County. The Conservancy proposed to conduct approximately 2,500 linear feet of restoration activities along two tributaries to Dogue Creek. The landowner place 5.30 acres under deed restriction in 2009, which consists of a "no-touch" stream and riparian buffer corridor. The deed restriction is held by the NOVA SWCD. Long-term protection of the property is accomplished through this deed restriction.

The Conservancy anticipates development of the stream restoration design, acquisition of permits, and implementation of the restoration to be completed in 2010.

PO-3 Goose Creek Site
Please reference the 2007 Annual Report for details on this project.

The purpose of this project is to conduct stream restoration, enhancement, and livestock exclusion activities at a property in Loudoun County. The Conservancy proposed to install livestock exclusion fencing and conduct restoration and enhancement activities along approximately 6,877 linear feet of several unnamed tributaries to Crooked Run. The landowners will donate a conservation easement over an approximate 80 to 100 foot wide "no-touch" riparian area along each bank of the tributaries on the subject property (total of 28 acres). This easement will be held by the Conservancy. Long-term protection of the property will be accomplished through the monitoring and enforcement of the easement by the Conservancy. The schedule for the stream monitoring and reporting events will be finalized through the permitting process.

The Conservancy anticipates the easement will be finalized in 2010. Once the easement is signed, the Conservancy will finalize the planning process to implement this project.

PO-4 Goose Creek Site
This project was officially closed in 2007. Please reference the 2007 Annual Report for details on this project.

PO-5 Goose Creek (Bluewildlife, LLC)
Please reference the 2007 Annual Report for additional background information on this project.

The purpose of this project is to conduct non-tidal wetland enhancement and creation and stream restoration, enhancement and preservation activities at the Bluewildlife property in Fauquier County. The Conservancy proposed to restore the forest cover in the riparian area of the property and to restore the proper dimension, pattern, and profile to the degraded portion of Bolling Branch that occurs on the property along with several unnamed tributaries and the creation of a floodplain wetland system.

The stream channel and wetland restoration activities were completed in spring 2009. The as-built survey indicated that the project generated 4.71 acres of non-tidal wetland restoration/creation, 1.41 acres of non-tidal wetland enhancement, for a total of 5.17 non-tidal wetland credits. The project also generated 7,243 linear feet of stream restoration/enhancement and 22.55 acres of riparian buffer restoration. The first year mitigation monitoring for the streams and wetlands was also completed in 2009.

The results of the 2009 wetland hydrological monitoring indicate that all wells are meeting the hydrology criteria. Herbaceous, percent FAC or wetter, and Prevalence Index values reflect that the site is also meeting the wetland vegetation criteria. Although all areas reflect average stem densities above 400 stems per acre, supplemental wetland vegetation planting will occur in spring 2010 in zones where values dropped below the criterion to ensure continued success.

The results of the 2009 stream monitoring indicate that all stream stability and geomorphic metrics meet or exceed the success criteria for Bolling Branch and tributaries. All vegetation metrics also meet or exceed the success criteria with the exception of woody stem density in two of the tributaries. Supplemental planting will be conducted in these areas in spring 2010 to ensure future success.

Isolated areas of cattail (*Typha latifolia*), reed canary grass (*Phalaris arundinacea*), and Microstegium (*Microstegium vimineum*) were noted in portions of the wetlands and riparian buffer during the 2009 monitoring. The Conservancy will monitor these potentially problematic species and will implement corrective action if it is needed. 2010 will be the second year post construction and wetland and stream mitigation monitoring is scheduled through 2018 with reports submitted to the Corps.

PO-6 Crow's Nest (Stafford Lakes Partnership, Phase I)
Please reference the 2008 Annual Report for additional background information on this project. The purpose of this project is to conduct tidal wetland preservation, non-tidal wetland preservation, stream preservation and upland buffer preservation on Phase I of the Crow's Nest property in Stafford County.

A remote delineation/assessment of surface waters and wetlands, based on the field verification of existing NWI maps, using topographic and soils maps of the property as supporting data, was conducted by Conservancy staff in fall 2008 and submitted to the Corps on February 20, 2009. The property is 1,700 +/- acres, with the mitigation area including preservation of 385 acres of non-tidal wetlands, 108 acres of tidal wetlands, 79,445 linear feet of streams,144 acres of non-tidal wetland upland buffers and 306

acres of stream upland buffers. Mitigation credits generated from this project include 8.96 credits for tidal wetlands and 39.28 credits for non-tidal wetlands. The project also includes 737 acres of additional protected acreage. All allocated funds were spent during acquisition. There is no funding remaining in the budget. The project was officially closed via a letter from the Corps dated March 16, 2009.

PO-7 Crow's Nest Phase II

Please reference the 2008 Annual Report for additional background information on this project.

The purpose of this project is to complete the acquisition of the remaining Crow's Nest property (Phase II) and conduct tidal wetland preservation, non-tidal wetland preservation, stream preservation and upland buffer preservation in Stafford County.

A remote delineation/assessment of surface waters and wetlands, based on the field verification of existing NWI maps, using topographic and soils maps of the property as supporting data, was conducted by Conservancy staff in August 2009. The property is 1,101.77, with the mitigation area including 60 acres of non-tidal wetland preservation, 9 acres of tidal wetland preservation, 49.28 acres of wetland buffer preservation, and 237.99 acres of stream buffer preservation along 30,796.54 linear feet of stream. Mitigation credits generated from this project include 0.75 credits for tidal wetland preservation, 4.98 credits for non-tidal wetland preservation, and 2.46 credits for non-tidal wetland buffer preservation. The project also includes 745.5 acres of additional protected acreage. The unspent funds of $974.98 have been unallocated from this project and returned to the general balance of the Fund. The project was officially closed via a letter from the Corps dated December 21, 2009.

Rappahannock River Basin

The Rappahannock River Basin is comprised of two HUCs (02080103 and 02080104) encompassing the headwaters of the Rappahannock and Rapidan rivers east to the Chesapeake Bay. This basin is located within both the Conservancy's Piedmont and Chesapeake Bay Lowlands ecoregions. Conservation targets include small, Blue Ridge foothill streams and inner Piedmont streams, tributaries, and rivers, anadromous fishes, freshwater mussels, seepage wetlands, tidal freshwater system, migratory land birds and raptors, Coastal Plain mixed pine-hardwood forest matrix, Piedmont forest matrix, and calcareous forest.

The projects discussed in this section serve as mitigation for permitted impacts within the Rappahannock River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2009 are listed on the below tables. Complete project descriptions for projects approved prior to 2009 may be found in the 2008 Annual Report. Updates are given for each project as applicable. Complete descriptions of projects approved during 2009 are provided below.

The following table provides a summary of projects for which funds were approved in the Rappahannock River Basin.

Table 32: Approved Project Summary for the Rappahannock River Basin						
Project ID	Project Name	Purpose of Proposal	Corps Approval Date	Funds Authorized		
				Non-Tidal Wetland Projects ($)	Tidal Wetland Projects ($)	Stream Projects ($)
RP-1	Rappahannock Phragmites Control	M	4/11/2001	0	10,000	0
RP-2	Linden Farm	M	7/30/2002	0	0	61,894
RP-3	Rappahannock River Fish Passage	M	12/5/2002	0	0	39,700
RP-4	Upper Rappahannock (City of Fredricksburg)	M	6/30/2003	0	0	1,100,000
		M	5/23/2005	0	0	206,275
		M	7/27/2006	0	0	654,665
		M	2/22/2007	0	0	56,479
		M	5/7/2008	0	0	300,275
RP-5	Rappahannock River (Wellford)	M	4/21/2005	14,000	0	0
			8/28/2008	3,700	0	0
RP-6	Rapidan River Site	A	9/9/2005	6,500	0	0
RP-7	Upper Rappahannock Forest Block site	M	2/22/2007	114,816	0	0
RP-8	Upper Rappahannock Forest Block (Collawn, R.)	M	2/22/2007	121,316	0	0
		M	8/28/2008	1,945	0	0
RP-9	Rappahannock River (Rose)	M	8/10/2007	81,000	0	0
RP-10	Rappahannock River (Rose II)	M	2/8/2008	75,000	0	0
		M	8/28/2008	500	0	0
RP-11	Mountain Run (EBX)	M	2/8/2008	869,400	0	0
		M	4/3/2008	29,941	0	0
RP-12	Rappahannock River (Norman's Ford – Jamie Craig)	M	2/25/2008	150,000	0	0
RP-13	Rappahannock River site	M	6/16/2008	250,000	0	129,545
		M	8/5/2008	27,818	0	27,818
			Totals	**1,745,936**	**10,000**	**2,576,651**
			Grand Total	**4,332,587**		

Table 33 provides a summary of projects which have closed in the Rappahannock River Basin.

Table 33: Closed Project Summary for the Rappahannock River Basin

Project ID	Corps Approval Date	Corps Closure Date	Amount Approved ($)	Amount Unallocated ($)	Wetland Credits	Stream Activity	
						Buffer Preservation (lf)	Livestock Exclusion (lf)
RP-1	4/11/2001	8/14/2007	10,000	0	1.6	N/A	N/A
RP-2	7/30/2002	7/27/2007 8/5/2008	61,894	6,961.74	N/A	2,000	7,742
RP-3	12/5/2002	7/27/2007	39,700	0	N/A	N/A	N/A
RP-6	9/9/2005	7/27/2007	6,500	3,500	N/A	N/A	N/A
RP-7	2/22/07	2/17/2009	114,816	114,816	N/A	N/A	N/A
RP-8	2/22/07 8/28/08	11/29/2009	123,261	1,500	1.56	N/A	N/A
RP-9	8/10/07	12/21/2009	81,000	2,990	1.2	N/A	N/A
RP-10	2/8/08	12/21/2009	75,500	260	2.85	N/A	N/A
RP-12	2/25/2008	12/16/2008	150,000	0	2.92	N/A	N/A
		Totals	**662,671**	**130,028**	**10.13**	**2,000**	**7,742**

The following tables summarize the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal and tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Rappahannock River Basin. In addition, the tables provide the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 34: Non-Tidal Wetland Project Summary for the Rappahannock River Basin										
Project Information		**NT Wetland (Ac)**			**Upland (Ac)**		**Mitigation Acres**	**Proposed Credits**	**Completed Credits**	**Additional Protected Acreage (ac)**
Project ID	**Status**	**Rest/Cr**	**Pres**	**Enh**	**Rest**	**Pres**				
RP-5	D,PC	0	16.4	0	0	1.6	18	1.72	N/A	0
RP-8	C	0	11.49	0	0	8.31	19.8	N/A	1.56	56.3
RP-9	C	0	7.6	0	0	14	21.6	N/A	1.20	53
RP-10	C	0	7.3	0	0	25.5	32.8	N/A	2.85	55
RP-11	I	17.25	4.58	0.82	5.5	2.48	30.63	18.47	N/A	0
RP-12	C	2.92	0	0	0	0	2.92	N/A	2.92	0
RP-13	LP	32.23	0	0	19.0	0	51.23	33.50	N/A	137
Sub-totals		**52.40**	**47.37**	**0.82**	**24.5**	**51.89**	**176.98**	**53.69**	**8.53**	**301.30**
Total Acres of Non-Tidal Impacts					**10.21**					
Total Mitigation Liability					**19.28**					
Total Proposed/Completed Credits					**62.22**					
Percent of Wetland Acreage Replacement					**513.2**					

LP - Pending finalization of land protection

P - Planning / permitting

D - Pending delineation / assessment

C - Closed

*Project includes stream or tidal wetland mitigation

I - Restoration/Enhancement/Creation activities in progress

M - Mitigation monitoring

CA - Corrective actions necessary

PC - Pending project closure

Table 35: Tidal Wetland Project Summary for the Rappahannock River Basin							
Project Information		**Tidal**	**Tidal**	**Tidal**	**Upland Buffer**	**Mitigation**	**Completed**
Project ID	**Status**	**Rest**	**Enh**	**Pres**	**Pres**	**Acres**	**Credits**
RP-1	C	0	80	0	0	80	1.6
Acre Sub-totals		**0**	**80**	**0**	**0**	**80**	**1.6**
Credit Sub-totals		**0**	**1.6**	**0**	**0**		
Total Acres of Tidal Impacts					**0**		
Total Mitigation Liability					**0**		
Total Proposed Credits					**1.6**		
Percent of Wetland Acreage Replacement					**N/A**		
LP - Pending finalization of land protection				I - Restoration/Enhancement/Creation activities in progress			
P - Planning / permitting				M - Mitigation monitoring			
D - Pending delineation / assessment				CA - Corrective actions necessary			
C - Closed				PC - Pending project closure			

As noted in Section II, the Fund has been used to mitigate for 15,862 linear feet of permitted stream impacts in the Rappahannock River Basin through 2009. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Rappahannock River Basin.

Table 36: Pre-USM Stream Project Summary for the Rappahannock River Basin					
Project ID	**Project Status**	**Stream Mitigation Area (ac)**	**Channel Length in Mitigation Area (lf)**	**Mitigation Activity Description**	**Additional Protected Acreage**
RP-2	C	28	7,742	Riparian buffer planting (approximately 100 to 300 feet wide) along both banks of 2,000 lf of stream channel. Livestock exclusion fencing installed to protect 7,742 lf of unnamed tributaries to Mountain Run and a pond.	0
RP-3	C	NA	NA	Installed an Alaskan steep-pass structure in White Oak Run to allow the migration of anadromous fishes.	NA
RP-4+	LD	1090.38	264,738	Riparian buffer preservation of 59,712 linear feet along both banks and 33,886 lf along one bank of the Rappahannock River. Riparian buffer preservation of 32,290 lf along both banks and 20,591 lf along one bank of the Rapidan River. Riparian buffer preservation along 134,163 lf of both banks of unnamed tributaries to the two rivers. Protected buffers are 100 foot wide predominantly mature woodlands. Funding for this project is both pre-USM and USM.	2,978.62
	Totals	**1,118.38**	**272,480**		**2,978.62**
Total Impacts (lf)		**10,771.00**			

ac - acre lf - linear feet

LP - Pending finalization of land protection

P - Planning / permitting

D - Pending delineation / assessment

C - Closed

I - Restoration/Enhancement/Creation activities in progress

M - Mitigation monitoring

CA - Corrective actions necessary

PC - Pending project closure

*Project includes wetland mitigation

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping")

Table 37: USM Stream Impacts and Mitigation Summary for the Rappahannock River Basin

Project Information		Stream Activity (lf)			Upland Buffer (ac)				
Project ID	Status	Rest/Enh	Pres	Livestock Exclusion	Rest	Pres	Mitigation (ac)	Total Channel Length (lf)	Proposed Credits (CC)
RP-4+	D	0	39,559	0	0	163	163	39,559	7,493
RP-13+	LP	0	3,900	0	0	33	33	3,900	648
Sub-totals		**0**	**43,459**	**0**	**0**	**196**	**196**	**43,459**	**8,141**
Total Linear feet of Impacts (lf)					**5,091**				
Total Compensation Required (TCR)					**5,256**				
Total Proposed Credits (CC)					**8,141**				

LP - Pending finalization of land protection
P - Planning / permitting
D - Pending delineation / assessment
C - Closed
I - Restoration/Enhancement/Creation activities in progress
M - Mitigation monitoring
CA - Corrective actions necessary
PC - Pending project closure
*Project includes pre-USM and USM funding

Project Summaries

The following section provides a detailed summary of each project located within the Rappahannock River Basin for which the Corps authorized funds during 2008. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project.

RP-1 Rappahannock River Phragmites Control

This project was officially closed on November 16, 2007. Details about this project can be found in the 2007 Annual Report.

RP-2 Linden Farm

This project was officially closed 2008. Please reference the 2008 Annual Report for details on this project.

RP-3 Rappahannock River Fish Passage

This project was officially closed on July 27, 2007. Details about this project can be found in the 2007 Annual Report.

RP-4 Upper Rappahannock (City of Fredericksburg)
The purpose of this project is to conduct stream and the associated upland riparian buffer preservation along a significant length of the Rappahannock and Rapidan Rivers (and associated tributaries) on a property owned by the City of Fredericksburg. The initial funding for this project was approved by the Corps on June 30, 2003, with three subsequent approvals on May 23, 2005, July 27, 2006, and February 22, 2007. In 2008, the Conservancy requested additional funds to complete a boundary survey of the property. The Conservancy and partners purchased a conservation easement on approximately 4,232 acres along the two major rivers. The Conservancy, the Virginia Outdoors Foundation, and the Virginia Department of Game and Inland Fisheries co-hold the easement. Long-term protection of the site will be achieved through the monitoring and enforcement of the easement. No additional monitoring is required for this project.

The Conservancy anticipates closing this project following completion of the boundary survey and surface water delineation or assessment in 2010.

RP-5 Rappahannock River (Wellford)
The purpose of this project is to conduct non-tidal wetland and upland buffer preservation at the Wellford Farms property in Richmond County. The funding for this project was approved by the Corps on April 21, 2005. Subsequent funding was approved on August 28, 2008. The Conservancy proposed to buy the timber rights for an 18-acre portion of the property including wetlands and upland buffer. The property was placed under easement on April 5 2005, which is held and monitored by the Virginia Outdoors Foundation (VOF). Long-term protection of this site is achieved through the monitoring and enforcement of this easement by VOF. No additional monitoring is required for this project.

The Conservancy negotiated purchase of a conservation easement to extinguish the timber rights on 18.0 acres containing approximately 16.4 acres of forested wetlands and 1.6 acres of upland buffers on the property. A wetland delineation of the mitigation area was completed in 2008, showing a marked difference from what was proposed, though showing potential for restoration. The Conservancy will investigate the full potential for restoration before proceeding further with this project.

RP-6 Rapidan River Site
This project was officially closed on July 27, 2007. Details about this project can be found in the 2007 Annual Report.

RP-7 Upper Rappahannock Forest Block site
The purpose of the project was to pursue wetland restoration and preservation mitigation activities located in Essex County, in the Rappahannock River Basin.

The Conservancy is requesting this project be officially withdrawn and closed. The Conservancy was unable to reach agreeable terms with landowner. No funds were spent for this project; therefore, the entire balance of allocated funds ($114,816.00) was returned to the general balance of the Trust Fund. The project was officially closed via a

letter from the Army Corps of Engineers dated December 17, 2009.

RP-8 Upper Rappahannock Forest Block (Collawn, R.)
The purpose of this project is to conduct wetland and upland preservation mitigation activities on the Collawn property on Hutchinson Creek, a tributary to the Rappahannock River in Essex County. Reference the 2008 Annual Report for additional background information on this site.

A delineation of surface waters and wetlands on the property was conducted in October 2008 and confirmed in February 2009. The non-tidal wetland (11.49 acres) is comprised primarily of mature bottomland hardwood forest. Upland riparian buffer preservation areas (8.31acres) will be preserved landward from the outside limits of the wetland system. Other upland areas, designated as additional protected acreage, are estimated at 56.3 acres and are comprised of managed timber stands and a small residential area that are not considered part of the mitigation acres. The Conservancy requested official closure of this project in 2009. The project was officially closed via a letter from the Army Corps of Engineers dated November 29, 2009. Funds in the amount of $1,500.00 were returned to the general balance of the Fund.

RP-9 Rappahannock River (Rose)
The purpose of this project is to conduct wetland preservation activities on the 74.6-acre Rose property on the Rappahannock River in Essex County. Reference the 2008 Annual Report for additional background information on this site.

A delineation was conducted and was confirmed by the Corps in 2009. The property has 74.6 cares total under easement, 21.6 acres of this are wetland mitigation and 53 acres are additional protected acres. The project was officially closed via a letter from the Army Corps of Engineers dated December 21, 2009. There was $2,990.00 remaining in the budget which has been returned to the general balance of the Fund.

RP-10 Rappahannock River (Rose II)
The purpose of this project is to conduct a non-tidal wetland and upland buffer preservation project on the Rappahannock River in Essex County Virginia, immediately adjacent to RP-9. Reference the 2008 Annual Report for additional background information on this site.

A delineation was conducted and was confirmed by the Corps in 2009. The property has 87.4 acres total under easement, 7.3 acres of this are non-tidal wetlands with a 200 ft buffer (25.5 ac) as mitigation and 54.6 acres are additional protected acres. The project was officially closed via a letter from the Army Corps of Engineers dated December 21, 2009. There was $260.00 remaining in the budget which has been unallocated from this project and returned to the general balance of the Fund.

RP-11 Mountain Run (EBX)
The purpose of this project is to conduct a non-tidal wetland restoration and creation, wetland enhancement and preservation and upland buffer restoration, enhancement and preservation adjacent to Mountain Run in Orange County. Reference the 2008 Annual

Report for additional background information on this site.

Construction of the wetlands mitigation project was completed in April 2009. Monitoring in October 2009 indicated that all wetland restoration and creation areas exhibited wetlands hydrology, consisting of continuous saturation or inundation for at least 9% of the growing season, in accordance with the approved project monitoring plan. Furthermore, 7 of 17 groundwater monitoring wells recorded hydrology for greater than 12.5% of the growing season. All restoration and creation areas exceeded minimum requirements for wetland vegetation dominance, however, a portion of the site did not exhibit a minimum woody stem density of 400 stems per acre. Observations indicate that a significant level of ponding had occurred in a portion of the cell exhibiting low stem densities, which hindered the survivability of the woody species. Supplemental plantings are scheduled to be implemented prior to the 2010 growing season. This project is being managed through a full delivery contract. All aspects of the project through the monitoring and delivery of credits will be handled under this contract. 2009 is the first year post construction and mitigation monitoring is scheduled through 2018, with reports submitted to the Corps in 2010, 2011, 2013, 2015, and 2018.

RP-12 Rappahannock River (Norman's Ford – Jamie Craig)

This project was officially closed 2008. Please reference the 2008 Annual Report for details on this project.

RP-13 Rappahannock River site

The purpose of this project is to acquire a conservation easement and complete a wetland and stream mitigation project on a tract in Essex County, Virginia. Funding for this project was approved by the Corps on June 16, 2008 and August 5, 2008. Based upon preliminary information and assessment of the property, wetland restoration activities will be conducted on approximately 24 to 40 acres with an additional 18 to 20 acres of forested buffer created in the adjacent uplands. In addition, approximately 33 acres will be preserved to protect the existing riparian buffer along 3,900 lf of tributaries to the Rappahannock River. Long term protection of the site will be achieved through a conservation easement. Additional details regarding the background information of this site can be found in the 2008 Annual Report. The Conservancy is currently negotiating the terms of the mitigation project and conservation easement with the landowner.

Roanoke River Basin

The Roanoke River Basin is comprised of seven HUCs (03010101, 03010102, 03010103, 03010104, 03010105, 03010106 and 0304010) encompassing the Roanoke headwaters and the Dan River draining south into North Carolina. This basin is located within both the Conservancy's Piedmont and Central Appalachian Forest ecoregions. Conservation targets include Ridge and Valley rivers, calcareous seeps/fens, basic mesic forests, acidic oak pine forests, calcareous woodlands/forests, and warmwater fish communities including orangefin, madtom, Roanoke hogsucker, bigeye jumprock, Roanoke logperch and riverweed darter.

The projects discussed in this section serve as mitigation for permitted impacts within the Roanoke River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2009 are listed on the below tables. One new project was approved in 2009. Complete project descriptions for projects approved prior to 2009 may be found in earlier reports as indicated below. Updates are given for 2009 for each project as applicable. Complete descriptions of projects approved during 2009 are provided below.

The following table provides a summary of projects for which funds were approved in the Roanoke River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

Table 38: Approved Project Summary for the Roanoke River Basin						
Project ID	Project Name	Purpose of Proposal	Corps Approval Date	Funds Authorized		
				Non-Tidal Wetland Projects ($)	Tidal Wetland Projects ($)	Stream Projects ($)
RO-1	Apple Orchard Mountain (Edwards)	M	6/7/2005	0	0	180,000
RO-2	Apple Orchard Mountain (City of Bedford)	M	6/7/2005	0	0	15,000
		M	2/7/2006	0	0	8,250
RO-3	Goose Creek-Roanoke (Bedford County)	F	2/22/2007	10,075	0	10,075
		C	2/8/2008	9,000	0	0
		M	12/16/2008	231,000	0	469,000
		M	3/16/2009	10,000.00	0.00	17,000.00
RO-4	Turkeycock Mountain (Grassy Fork site)	A	2/8/2008	1,500	0	1,500
RO-5	Poor Mountain (Sanzone)	M	11/2/2008	0	0	45,000
RO-6*	Roanoke Headwaters site	M	9/28/2009	0	0	45,000
			Totals	**261,575**	**0**	**790,825**
			Grand Total	**1,052,400**		
M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey						
*Denotes use of USM funds						

The following table summarizes the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Roanoke River Basin. In addition, the table provides the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 39: Non-Tidal Wetland Project Summary for the Roanoke River Basin									
Project Information		**NT Wetland (Ac)**			**Upland (Ac)**		**Mitigation Acres**	**Proposed Credits**	**Additional Protected Acres (ac)**
Project ID	**Status**	**Rest/ Cr**	**Pres**	**Enh**	**Rest**	**Pres**			
RO-3	P	4	13.3	0	7	1.7	26	5.88	0
Sub-totals		**4**	**13.3**	**0**	**7**	**1.7**	**26**	**5.88**	**0**
Total Acres of Non-tidal Impacts						**4.03**			
Total Mitigation Liability						**7**			
Total Proposed Credits						**5.88**			
Percent of Wetland Acreage Replacement						**99.26**			
LP - Pending finalization of land protection					I - Restoration/Enhancement/Creation activities in progress				
P - Planning / permitting					M - Mitigation monitoring				
D - Pending delineation / assessment					CA - Corrective actions necessary				
C - Closed					PC - Pending project closure				

As noted in Section II, the Fund has been used to mitigate for 6,458 linear feet of permitted stream impacts in the Roanoke River Basin through 2009, both before and after implementation of the USM. The following tables summarize the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Roanoke River Basin. These tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development. The project approved in 2009 utilizes USM funds; all projects approved prior to 2009 have utilized pre-USM funds.

Table 40: Pre-USM Stream Project Summary for the Roanoke River Basin					
Project ID	**Project Status**	**Stream Mitigation Area (ac)**	**Channel Length in Mitigation Area (lf)**	**Mitigation Activity Description**	**Additional Protected Acreage (ac)**
RO-1	C	36.5	5,220	Riparian buffer preservation along 2,379 lf of the right bank of Little Stony Creek with an existing mature wooded buffer width of 200 feet. Within this reach, riparian buffer preservation along 659 lf of the left bank with an existing mature wooded buffer width of primarily 125 feet. Stream system preservation along both banks of 2,841 lf of three unnamed tributaries to Little Stony Creek with an existing mature wooded buffer width of 200 feet (except for several areas of a minimum 125 foot buffer).	16.5
RO-2	C	3.96	788	Riparian buffer preservation along 788 lf of the right bank of Little Stony Creek with an existing mature wooded buffer width of 200 feet. Within this reach, riparian buffer preservation along 300 lf of the left bank with an existing mature wooded buffer width of 50 feet.	9.79
*RO-3	P	7	2,980	Stream restoration along 1,762 lf of the South Fork of the Goose Creek, stream enhancement along 1,218 lf of the South Fork of the Goose Creek, and riparian buffer restoration and preservation along the entire project length.	N/A
RO-5	I	116	14,700	Riparian buffer preservation along both banks of 12,800 lf of Dry Branch and tributaries, with forested buffer along both banks Riparian buffer preservation along one bank of 1,900 lf of Dry Branch. Invasive species removal and reforestation along 800 lf of Dry Branch.	394
	Totals	**163.46**	**23,688**		**420.29**
Total Impacts (lf)		**4,635**			

ac - acre lf - linear feet

LP - Pending finalization of land protection

I - Restoration/Enhancement/Creation activities in progress

P - Planning / permitting

M - Mitigation monitoring

D - Pending delineation / assessment

CA - Corrective actions necessary

C - Closed

PC - Pending project closure

*Project includes wetland mitigation

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping")

Table 41 details the impacts and mitigation activities funded by revenues accrued under the Unified Stream Methodology.

Table 41: USM Stream Impacts and Mitigation Summary for the Roanoke River Basin

Project Information		Stream Activity (lf)			Upland Buffer (Ac)		Mitigation (ac)	Additional Protected (ac)	Proposed Credits
Project ID	Status	Rest/Enh	Pres	Livestock	Rest	Pres			
RO-6	LP, P	1,903	2,926	0	11.5	168.3	179.8	45.4	1,614
Totals		**1,903**	**2,926**	**0**	**11.5**	**168.3**	**179.8**	**45.4**	**1,614**
Total Linear Feet of Impacts (lf)					**1,823**				
Total Compensation Required (TCR)					**1,397**				
Total Proposed Credits (CC)					**1,614**				

LP - Pending finalization of land protection

P - Planning / permitting

D - Pending delineation / assessment

C - Closed

I - Restoration/Enhancement/Creation activities in progress

M - Mitigation monitoring

CA - Corrective actions necessary

PC - Pending project closure

*Project includes pre-USM and USM funding

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Table 42: Closed Project Summary for the Roanoke River Basin

Project ID	Corps Approval Date	Corps Closure Date	Amount Approved ($)	Amount Unallocated ($)	Non-Tidal Wetland Credits	Tidal Wetland Credits	Stream Activity	
							Buffer Preservation (lf)	Livestock Exclusion (lf)
RO-1	6/7/2005	8/5/2008	180,000	174,251.70	0	0	5,220	0
RO-2	6/7/2005	8/5/2008	22,250	20,379.04	0	0	788	0
		Totals	202,250	194,631	0	0	6,008	0

Project Summaries
The following section provides a summary of each project located within the Roanoke River Basin for which the Corps has authorized funds through2009. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Details of projects approved before 2009 may be found in earlier reports as indicated below.

RO-1 Apple Orchard Mountain (Edwards)
This project was officially closed in 2008. Please reference the 2008 Annual Report for details on this project.

RO-2 Apple Orchard Mountain (City of Bedford)
This project was officially closed in 2008. Please reference the 2008 Annual Report for details on this project.

RO-3 Goose Creek-Roanoke (Bedford County)
Please reference the 2008 Annual Report for additional background details on this project.

The purpose of this project is to conduct non-tidal wetland and stream restoration at Montvale Park in Bedford County. The area of interest for this mitigation project is approximately 33 acres and includes approximately 3,100 linear feet of South Fork Goose Creek, its adjacent floodplain and a steep bluff to the south that is forested and contains one small tributary to South Fork Goose Creek. These areas contain a mixture of wetland, converted wetland and upland. Sections of the South Fork of Goose Creek have an established forested buffer, while other sections have either no or minimal wooded buffer. The landowners donated a conservation easement on the site to the Western Virginia Land Trust and the Nature Conservancy in 2009, which provides long-term protection of the property.

The stream and wetland restoration design was completed in winter 2009. The Conservancy anticipates acquisition of permits and implementation of the restoration to be completed in 2010.

RO-4 Turkeycock Mountain (Grassy Fork site)
Please reference the 2008 Annual Report for background information on this project.

The purpose of this project is to conduct stream preservation on an approximately 350-acre property in Franklin County. The property encompasses approximately two miles of Grassy Fork and an unnamed tributary to Crab Creek. The property appraisal was completed in 2008 and negotiations have not progressed with the landowner. The Conservancy anticipates closing this project in 2010.

RO-5 Poor Mountain (Sanzone)
Please reference the 2008 Annual Report for additional background information on this

project.

The purpose of this project is to conduct a stream and riparian buffer preservation and enhancement project on Dry Branch, a tributary of the Roanoke River, in Roanoke County, Virginia. The project seeks to accomplish preservation of approximately 13,200 linear feet of both banks of 1st and 2nd order tributaries to the Roanoke River and 1,500 linear feet of one bank of a tributary. The Conservancy has also proposed the enhancement of 2 acres of riparian buffer along 800 linear feet of one bank of Dry Branch through removal of existing tree-of-heaven (*Ailanthus altissima*) trees and replanting with native trees and shrubs.

The initial invasive species removal was completed in early 2009 and the Conservancy anticipates completion of the planting in spring 2010.

RO-6 Roanoke Headwaters site The purpose of this project is to conduct stream system preservation and riparian buffer enhancement on Mill Creek in the Roanoke Headwaters in Montgomery County, Virginia. The funding for this project was approved by the Corps on September 28, 2009. The project mitigates for stream impacts using USM funds. The Conservancy will accept donation of fee title over the approximately 225.2-acre tract to secure the long-term protection of the property. The Conservancy plans to manage this property as a preserve.

The property contains some of the best examples of undisturbed natural communities in the area as well as unique karst features likely containing threatened and/or endangered species. The property is located along Mill Creek, a tributary to the North Fork of the Roanoke River, and is almost entirely forested. The parcel contains approximately 4,671 linear feet of Mill Creek and 183 linear feet of a tributary to Mill Creek, and provides for protection of a buffer ranging from 143 feet to over 2,000 feet. The streams are high quality, pristine, and stable with healthy intact native forest throughout the majority of the riparian buffer.

TNC's Central Appalachian Ecoregional Plan identified the Slussers Chapel Cave Conservation Area and the Upper Roanoke River Conservation Area, which are in the Roanoke Headwaters Landscape, as priority areas. The Upper Roanoke River drainage is a meeting ground of the alkaline waters of the Central Appalachians and the acidic waters of the Southern Blue Ridge ecoregions. It is part of the greater Roanoke drainage which has the highest number of endemic fish species on the Atlantic Slope (six species total), and is the 3rd most species rich drainage of the Atlantic Slope. Four of these six endemics, two of which are endangered or declining (orangefin madtom and the bigeyed jumprock), occur in the conservation area along with one federally endangered species (Roanoke logperch). In addition, this property contains a montane dry calcareous forest/woodland community type which is a community of interest due to its rarity within this range.

The Slussers Chapel Cave Conservation Area is a Tier 1 karst priority area that contains many hydrologically significant caves, sinkholes and seeps which support rare and endemic species including the rare Ellet Valley Pseudotremia millipede, *Pseudotremia cavernarum*, a species endemic to Montgomery and Roanoke counties and listed as endangered under the Virginia Endangered Species Act, the Vandel's cave isopod, *Caecidotea vandeli* (G3G4 S2), and the cave beetle *Pseudanophthalmus pusio* (G2G3

S1S2). On a recent site visit conducted by staff from the Conservancy and the Virginia Department of Conservation and Recreation, two invertebrates were observed in the cave on the property that are believed to be Vandel's cave isopod and the cave beetle *Pseudanophthalmus pusio*. The Ellet Valley Pseudotremia millipede may also inhabit the cave. The cave is described as hydrologically significant as it transports water beneath a topographic divide, and may even transport some water beneath the eastern continental divide.

Based upon available information and site visits, TNC considers this to be an excellent opportunity for stream, riparian buffer, and cave preservation, along with riparian buffer enhancement in the Roanoke River Basin. Mitigation activities at the site will include preservation of approximately 4,671 linear feet of Mill Creek and 183 linear feet of a tributary to Mill Creek. The project will also include enhancement of approximately 1,903 linear feet of riparian buffer along Mill Creek. Though the forested buffer is very healthy through the majority of the tract, an area within the buffer in the southern portion of the property contains the invasive species autumn olive (*Eleaganus umbellata*). An area of about 1.7 acres is thick with autumn olive and will require removal and replanting with native trees. An area of about 8.4 acres has less dense populations of autumn olive which will require selective removal but not replanting. A small field (approximately 1.4 acres) is located adjacent to the mitigation area in the southern portion of the site and will be planted with native trees and shrubs to establish a forested community and provide additional protection to the stream and buffer. The total proposed mitigation area for this project is 179.8 acres, with 45.4 acres considered additional protected acreage.

The Conservancy anticipates that the land donation will be completed in early 2010. The restoration plan will also be developed and implemented in 2010.

Shenandoah River Basin

The Shenandoah River Basin is comprised of four HUCs (02070004, 02070005, 02070006, and 02070007) encompassing the headwaters of the Shenandoah River to the Potomac River. This basin is located within the Conservancy's Central Appalachian Forest Ecoregion. Conservation targets include Blue Ridge stream and tributaries, Central Appalachian mixed hardwood forest matrix, cave invertebrate communities, endangered wood turtles, freshwater mussels, and sportfish and nongame fish populations.

The projects discussed in this section serve as mitigation for permitted impacts within the Shenandoah River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2009 are listed on the below tables. Complete project descriptions for projects approved prior to 2009 may be found in earlier reports as indicated below. Updates for 2009 are given for each project as applicable. No new projects were pursued in 2009, although additional funding for one site was approved.

The following table provides a summary of projects for which funds were approved in the Shenandoah River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

Table 43: Approved Project Summary for the Shenandoah River Basin

Project ID	Project Name	Purpose of Proposal	Corps Approval Date	Funds Authorized		
				Non-Tidal Wetland Projects ($)	Tidal Wetland Projects ($)	Stream Projects ($)
SH-1	Cedar Creek (Mowery)	M	9/28/2006	0	0	1,576,000
SH-2	Blacks Run (City of Harrisonburg-Purcell Park)	M	12/7/2006	0	0	496,535
		M	9/24/2008	0	0	130,000
SH-3 / UJ-3	Laurel Fork (Rifle Ridge Farm, LLC)	M	11/19/2007	0	0	1,034,749
SH-4	Shenandoah Mountain/Cow Knob Site	M	2/17/2009	40,264.00	0.00	0.00
			8/28/2008	535,836	0	0
SH-5	Cedar Creek Site	M	8/28/2008	0	0	150,000
			Totals	**576,100**	**0**	**3,387,284**
			Grand Total	**3,963,384**		

M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey

The following table summarizes the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal wetland project pursued by

the Conservancy to serve as mitigation for impacts in the Shenandoah River Basin. In addition the table provides the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 44: Non-Tidal Wetland Project Summary for the Shenandoah River Basin

Project Information		NT Wetland (Ac)			Upland (Ac)		Mitigation Acres	Proposed Credits	Completed Credits
Project ID	Status	Rest/Cr	Pres	Enh	Rest	Pres			
SH-3 / UJ-3	C	0	18	0	0	0	18	-	1.49
SH-4	LP, P	10	0	0	6	0	16	10.40	
SH-5	LP	0	2	0	0	0	2	0.20	
Sub-totals		**10**	**20**	**0**	**6**	**0**	**36**	**10.6**	**1.49**
Total Acres of Non-Tidal Impacts					**8.70**				
Total Mitigation Liability					**10.89**				
Total Proposed Credits					**12.09**				
Percent of Wetland Acreage Replacement					**114.9**				

LP - Pending finalization of land protection
P - Planning / permitting
D - Pending delineation / assessment
C - Closed
I - Restoration/Enhancement/Creation activities in progress
M - Mitigation monitoring
CA - Corrective actions necessary
PC - Pending project closure

As noted in Section II, the Fund has been used to mitigate for 14,288 linear feet of permitted stream impacts in the Shenandoah River Basin through 2009. The following tables summarize the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Shenandoah River Basin. These tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development. Two projects have utilized pre-USM and USM funds.

Table 45: Pre-USM Stream Project Summary for the Shenandoah River Basin					
Project ID	**Project Status**	**Stream Mitigation Area (ac)**	**Channel Length in Mitigation Area (lf)**	**Mitigation Activity Description**	**Additional Protected Acreage (ac)**
SH-1	M	16	1,700	Riparian buffer planting 200 feet wide along each bank of 1,700 linear feet of Buffalo Marsh Run. Channel banks along this reach stabilized with live stakes.	94
SH-2+	M	13.39	3,241	Restoration/enhancement of 2,866 lf of Blacks Run, 705 lf of Siebert Creek, and 532 lf of an unnamed tributary to Siebert Creek. Riparian buffer planting and preservation ranging from 20 to 200 feet wide along both banks of Blacks Run, 20 to 80 feet wide along both banks of Seibert Creek, and 50 to 110 feet wide along both banks of the unnamed tributary. Funding for this project is both pre-USM and USM.	0
SH-3 / UJ-3*	C	482.6	32,223	Stream and riparian buffer preservation in the Shenandoah River Basin of 12,894 lf along both banks of Laurel Fork with a buffer ranging from 100-2,000 ft, 7,960 lf along both banks of Barkley Run with buffer widths ranging from 100-900 ft, 2,692 lf along one bank of Schoolhouse Run with buffer widths along the right bank of 100 feet and left bank of 35-100 ft, 2,569 lf along the left bank of Collins Run with a buffer width of 100 ft, and 6,108 lf along both banks of Blights Run with buffer widths on the right bank of 20-100 ft and left bank of 100 ft. Stream and riparian buffer preservation in the Upper James River Basin of 7,609 lf along both banks of Backs Creek and its tributaries with buffer width limited to the property boundary up to 100 ft.	1,076
	Totals	**511.99**	**37,164**		**1,170**

Total Impacts: **12,128 lf**

ac - acre lf - linear feet

LP - Pending finalization of land protection

P - Planning / permitting

D - Pending delineation / assessment

C - Closed

I - Restoration/Enhancement/Creation activities in progress

M - Mitigation monitoring

CA - Corrective actions necessary

PC - Pending project closure

*Project includes wetland mitigation

+Project includes pre-USM and USM funding

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping")

Table 46 details the impacts and mitigation activities funded by revenues accrued under the Unified Stream Methodology.

Table 46: USM Stream Impacts and Mitigation Summary for the Shenandoah River Basin

Project Information		Stream Activity (lf)			Upland Buffer (Ac)		Mitigation (ac)	Additional Protected (ac)	Proposed Credits
Project ID	Status	Rest/ Enh	Pres	Livestock	Rest	Pres			
SH-2+	M	862	0	0	1.68	1.87	3.55	0	874
SH-5	LP	0	1,519	0	0	10.5	10.5	10	465
Totals		**862**	**1,519**	**0**	**1.68**	**12.37**	**14.05**	**10**	**1,339**
Total Linear Feet of Impacts (lf)					**2,160**				
Total Compensation Required (TCR)					**1,965**				
Total Proposed Credits (CC)					**1,339**				

LP - Pending finalization of land protection
I - Restoration/Enhancement/Creation activities in progress
P - Planning / permitting
M - Mitigation monitoring
D - Pending delineation / assessment
CA - Corrective actions necessary
PC - Pending project closure

*Project includes pre-USM and USM funding

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

The following table details the projects closed through 2009 within the Shenandoah River basin.

Table 47: Closed project summary for the Shenandoah River Basin

Project ID	Corps Approval Date	Corps Closure Date	Amount Approved ($)	Amount Unallocated ($)	Non-Tidal Wetland Credits	Tidal Wetland Credits	Stream Activity	
							Buffer Preservation (lf)	Livestock Exclusion (lf)
SH-3 / UJ-3	11/19/2007	12/21/2009	1,034,749	6,566	1.49	0	32,223	0
		Totals	**1,034,749**	**6,566**	**1.49**	**0**	**32,223**	**0**

Project Summaries

The following section provides a summary of each project located within the Shenandoah River Basin for which the Corps has authorized funds through 2009. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project. Details of projects approved before 2009 may be found in earlier reports as indicated below.

SH-1 Cedar Creek (Mowery)

Please reference the 2007 Annual Report for additional background information on this

project.

The purpose of this project is to conduct stream and riparian buffer enhancement at the Mowery property (also known as the Ogden's Cave project) in Frederick County. The Conservancy proposed to exclude cattle from the stream and plant a woody riparian buffer and live stakes along approximately 1,700 linear feet of Buffalo Marsh Run. The restoration activities were completed in spring of 2007.

The second year monitoring event was completed in 2009. The results of the monitoring indicated that the live stakes and riparian buffer plantings are meeting the success criteria. During monitoring year 1 (2008), the invasive spotted knapweed (*Centaurea stoebe)* was found to be present within the reforested buffer in the southwest portion of the mitigation area. The Virginia Department of Conservation and Recreation (DCR) Natural Heritage Program sprayed an adjacent field and this portion of the buffer area in May 2009 using Milestone VM to control the spread of the knapweed. The adjacent field was then seeded with warm season grasses. This treatment has been largely successful in killing the knapweed (>50% of the population was killed). However, during the 2009 monitoring, knapweed was noted again in two plots. Follow-up spraying to treat the knapweed will be conducted in spring 2010. Other invasive species were also noted within the buffer area, including autumn olive, wineberry, Johnson grass, and Chinese privet. These species pose less of an immediate threat to the success of the site. An adaptive management invasive species control plan is currently under development for the site. The year 3 monitoring will be conducted in 2010.

SH-2 Blacks Run (City of Harrisonburg)
Please reference the 2007 and 2008 Annual Reports for details on this project.

The purpose of this project is to conduct stream restoration activities at a park in the City of Harrisonburg. The project mitigates for stream impacts using both pre-USM and USM funds. The Conservancy proposed to conduct restoration activities along approximately 3,375 linear feet of Blacks Run, 830 linear feet of Seibert Creek, and 540 linear feet of an unnamed tributary to Seibert Creek.

The stream restoration and buffer planting activities were completed in spring 2009. The total channel length in the mitigation area is 5,310 linear feet. Mitigation activities generated 1,774 linear feet of stream restoration, 2,329 linear feet of stream enhancement, 8 acres of buffer restoration, and 8.9 acres of buffer preservation. The project provides 874 stream credits under USM.

The first year of monitoring will be conducted in 2010.

SH-3 / UJ-3 Laurel Fork (Rifle Ridge Farm, LLC)
Please reference the 2007 Annual Report for details on this project.

The purpose of this project is to preserve considerable stream length and stream systems as well as approximately 11 acres of wetlands on the Rifle Ridge Farm, LLC property in Highland County.

A remote delineation/assessment of surface waters and wetlands on the property was

conducted by Conservancy staff in November 2009. This site lies within the Upper James River Basin and the Shenandoah River Basin. The mitigation areas within the Upper James River Basin include preservation of 104.4 acres of stream buffer and 7,609 linear feet of Backs Creek and tributaries. All other mitigation areas (500.6 acres) are within the Shenandoah River Basin, and include 482.6 acres of stream buffer, 18 acres non-tidal wetlands, and 32,223 linear feet of streams. Mitigation activities at the site generated 1.49 non-tidal wetland credits for the Shenandoah River Basin. The site also provides 1,076 acres of additional protected lands. The project was officially closed via a letter from the Corps dated December 21, 2009. Unspent funds of $6,566.00 were returned to the general balance of the Fund for the Shenandoah River Basin.

SH-4 Shenandoah Mountain/Cow Knob Site
Please reference the 2008 Annual Report for details on this project.

The purpose of this project is to conduct non-tidal wetland restoration activities on a portion of a 200-acre property located in Fulks Run, Virginia. The mitigation area will be placed under a conservation easement. Long-term protection of the site will be accomplished through the monitoring and enforcement of the easement. The project will include a total of approximately 10.4 acres of wetland mitigation, including an appropriate mix of upland buffer (100 foot minimum), and emergent, scrub/shrub and forested wetland community types.

The Conservancy anticipates completion of land protection and wetland restoration activities in 2010.

SH-5 Cedar Creek Site
Please reference the 2008 Annual Report for details on this project.

The purpose of this project is to conduct a wetland, stream, and buffer preservation project on Buffalo Marsh Run adjacent to the Ogden's Cave property in Frederick County, Virginia. The property will be owned by DCR and protected with a deed of dedication which will require the property to be managed with the primary objectives of protecting stream water quality, natural heritage resources, and other native plants and animals. The project mitigates for stream impacts using USM funds.

Mitigation activities at the site include the preservation of approximately 1,519 lf of both banks of Buffalo Marsh Run, two acres of emergent wetland, and up to 10.5 acres of riparian buffer.

DCR and the Conservancy anticipate closing on this project in 2010.

Tennessee River Basin

The Tennessee River Basin is comprised of six HUCs (06010205, 06010206, 06010101, 06010102, 05070201, and 05070201) encompassing the headwaters of the Clinch, Holston, and Powell Rivers draining south into Tennessee. This basin is located within the Conservancy's Cumberland and Southern Ridge Valley Ecoregion. Conservation targets include endemic mussels and associated assemblages, Appalachian bogs, fens and seeps, Southern Appalachian forest matrix, upper Tennessee fish community, bats, karst communities, calcareous river-fronting slope communities and limestone and dolomite barrens.

The projects discussed in this section serve as mitigation for permitted impacts within the Tennessee River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2009 are listed on the below tables. Complete project descriptions for projects approved prior to 2009 may be found in earlier reports as indicated below. Updates are given for each project as applicable. Complete descriptions of projects approved during 2009 are provided below.

In an effort to address wetland impacts in the Tennessee River Basin, for which contributions were made to the Trust Fund for compensatory mitigation, the Conservancy issued a Request for Proposals on February 27, 2009, for development and delivery of 20 wetland mitigation credits. The scope of services for the solicitation included land acquisition and long-term protection via recordation of a conservation easement, development of a site specific plan for wetlands restoration/creation, development of mitigation design and construction plans, construction and construction supervision, post-construction monitoring, and final delineation and delivery of mitigation credits. Several proposals were submitted in response to the solicitation, and evaluated by the Conservancy in 2009. The Conservancy anticipates requesting funding and implementation of the preferred proposal in 2010.

The following table provides a summary of projects for which funds were approved in the Tennessee River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type.

Table 48: Approved Project Summary for the Tennessee River Basin						
Project ID	Project Name	Purpose of Proposal	Corps Approval Date	Funds Authorized		
				Non-Tidal Wetland Projects ($)	Tidal Wetland Projects ($)	Stream Projects ($)
TN-1	Gray's Island (Holson Land Company)	M	3/14/1997	0	0	7,000
TN-2	Barns Chapel (Gerry Smith Enterprises, Inc.)	M	3/28/2006	0	0	305,000
TN-3	Barns Chapel (Atwell)	M	3/28/2006	39,000	0	0
TN-4	Upper Clinch River Site	M	4/23/2006	3,000	0	3,000
TN-5	Pinnacle (Rich)	M	6/16/2008	0	0	43,090
TN-6	Rich Mountain Site	M	11/2/2008	43,000	0	0
TN-7	Upper Clinch River Site	M	9/28/2009	0	0	367,464
			Totals	**85,000**	**0**	**725,554**
			Grand Total	**810,554**		

M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey

Table 49 provides a summary of projects which have closed in the Tennessee River Basin.

Table 49: Closed Project Summary for the Tennessee River Basin							
Project ID	Corps Approval Date	Corps Closure Date	Amount Approved ($)	Amount Unallocated ($)	Wetland Credits	Stream Activity	
						Buffer Preservation (lf)	Livestock Exclusion (lf)
TN-1	3/14/1997	7/27/2007	7,000	0	N/A	6,000	6,000
TN-3	3/28/2006	11/16/2007	39,000	1,366.34	1.44	N/A	N/A
TN-4	4/23/2006	7/27/2007	6,000	0	N/A	N/A	N/A
		Totals	**52,000**	**1,366.34**	**1.44**	**6,000**	**6,000**

The following table summarizes the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the Tennessee River Basin. In addition, the table provides the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 50: Non-Tidal Wetland Project Summary for the Tennessee River Basin										
Project Information		NT Wetland (Ac)			Upland (Ac)		Mitigation	Proposed	Completed	Additional
Project ID	Status	Rest/ Cr	Pres	Enh	Rest	Pres	Acres	Credits	Credits	Protected Acreage
TN-3	C	0	0	4.01	0	2.11	6.12	N/A	1.44	0
TN-6	P	0	0	7.9	0	15.2	23.1	3.39	N/A	0
Sub-totals		**0**	**0**	**11.91**	**0**	**17.31**	**29.22**	**3.39**	**1.44**	**0**
Total Acres of Non-tidal Impacts							**18.29**			
Total Mitigation Liability							**26.34**			
Total Proposed/Completed Credits							**4.83**			
Percent of Wetland Acreage Replacement							**0**			

LP - Pending finalization of land protection	I - Restoration/Enhancement/Creation activities in progress
P - Planning / permitting	M - Mitigation monitoring
D - Pending delineation / assessment	CA - Corrective actions necessary
C - Closed	PC - Pending project closure

As noted in Section II, the Fund has been used to mitigate for 5,359 linear feet of permitted stream impacts in the Tennessee River Basin through 2009. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the Tennessee River Basin. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 51: Stream Project Summary for the Tennessee River Basin					
Project ID	**Project Status**	**Stream Mitigation Area (ac)**	**Channel Length in Mitigation Area (lf)**	**Mitigation Activity Description**	**Additional Protected Acreage (ac)**
TN-1	C	15.5	6,000	Riparian buffer preservation of 4,000 lf along the right bank of the Clinch River and 2,000 lf along both banks of Cub Creek with an existing mature wooded buffer ranging from 75 to 100 feet wide. Livestock exclusion fencing installed to protect the same reaches of the Clinch River and Cub Creek.	284.5
TN-2	M	6.7	1,580	Priority 1 relocation of 1,580 lf of Rattle Creek. Riparian buffer planting ranging from 35 to 250 feet along each bank for the length of the channel. Reconfiguration of an off-line pond and buffer plantings approximately 25 feet wide from the pond. Livestock exclusion fencing installed to protect 1,580 linear feet of the stream and the pond.	0
TN-5	PC	13.7	3,201	Stream channel and riparian buffer preservation along 3,201 linear feet of the Clinch River. Riparian buffer preservation will include an existing forested buffer ranging from 143 to 200 feet wide.	14.59
TN-7	LP	345	38,773	Stream channel and riparian buffer preservation along approximately 39,500 linear feet of the Clinch River and several major tributaries. Riparian buffer preservation will include an existing forested buffer 200 feet wide.	1,138
	Totals	**380.9**	**49,554**		**1437.09**
Total Impacts (lf)		**5,332**			

ac - acre lf - linear feet

LP - Pending finalization of land protection

I - Restoration/Enhancement/Creation activities in progress

P - Planning / permitting

M - Mitigation monitoring

D - Pending delineation / assessment

CA - Corrective actions necessary

C - Closed

PC - Pending project closure

*Project includes wetland mitigation

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping")

Table 52: USM Stream Project Summary for the Tennessee River Basin									
Project Information		Stream Activity (lf)			Upland Buffer (Ac)		Mitigation (ac)	Additional Protected (ac)	Proposed Credits
Project ID	Status	Rest/ Enh	Pres	Livestock	Rest	Pres			
TN-7	LP	0	727	0	0	6	6	0	153
Totals		**0**	**727**	**0**	**0**	**6**	**6**	**0**	**153**
Total Linear Feet of Impacts (lf)					**27**				
Total Compensation Required (TCR)					**19**				
Total Proposed Credits (CC)					**153**				

LP - Pending finalization of land protection
P - Planning / permitting
D - Pending delineation / assessment
C - Closed
I - Restoration/Enhancement/Creation activities in progress
M - Mitigation monitoring
CA - Corrective actions necessary
PC - Pending project closure

*Project includes pre-USM and USM funding

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Project Summaries

The following section provides a detailed summary of each project located within the Tennessee River Basin for which the Corps has authorized funds during 2009. The summaries include a description of the mitigation activities, partnering opportunities, long-term protection measures, conservation and ecological benefits, and current status of each project.

TN-1 Gray's Island (Holston Land Company)

This project was officially closed on July 27, 2007. For details on the project see the 2007 Annual Report.

TN-2 Barns Chapel (Garry Smith Enterprises, Inc.)

Please reference the 2008 Annual Report for additional background information on this project.

The purpose of this project is to conduct stream restoration activities and exclude livestock from a stream and pond at the Smith property located near Abingdon in Washington County. The Conservancy proposed to install livestock exclusion fencing, reconfigure a small pond, and conduct Priority 1 relocation on approximately 1,580 linear feet of Rattle Creek located on the property. Restoration activities were completed in 2007 and 2008.

The second year geomorphologic and vegetation monitoring event was completed in 2009. The results of the geomorphologic monitoring indicated that the site is performing as designed, and the streambanks and streambed are stable. Vegetation monitoring indicated that live stakes and herbaceous vegetation are meeting success criteria. Though the majority of the buffer area is currently well vegetated with trees and shrubs, supplemental planting will be conducted in portions of the buffer in spring 2010 to ensure continued future success. A few occurrences of the invasive multiflora rose (*Rosa*

multiflora) were noted. This invasive is not a problem at this point, but the Conservancy will continue to monitor the species. A few small Chinese privet (*Ligustrum sinense*) trees were also noted. This invasive is not become dominant at this time, but the plants on site will be hand-sprayed in spring 2010 to prevent spread of this species. An adaptive invasive species management plan will be developed for the site if needed.

TN-3 Barns Chapel (Atwell)
This project was officially closed on November 16, 2007. For details on the project see the 2007 Annual Report.

TN-4 Upper Clinch River Site
This project was officially closed without mitigation credits on July 27, 2007. For details on the project see the 2007 Annual Report.

TN-5 Pinnacle (Rich)
The purpose of this project is to complete a stream mitigation project on the Rich Tract in Russell County, Virginia. Stream preservation will be conducted on approximately 3,393 linear feet of stream channel. Funding for this project was approved by the Corps on June 16, 2008. The landowner sold the Conservancy 28.29 acres of property, providing a buffer ranging from approximately 143 feet to over 200 feet adjacent to the main stem of the Clinch River. The proposed mitigation area is approximately 9.75 acres. The additional 19.04 acres purchased will be reported as "additional protected acreage." Long-term protection of the site will be achieved through a deed restriction. The Conservancy intends to transfer ownership of the property to the Virginia Department of Conservation and Recreation in 2010. The Conservancy staff completed a surface water delineation of the site on April 20, 2009. Based on the delineation, the 28.29-acre property contains 13.7 acres of riparian buffer mitigation area and 14.59 additional protected acres. The property preserves 3,201 linear feet of the Clinch River. Project closure will be requested in 2010.

TN- 6 Rich Mountain site
The purpose of this project is to complete a 23.1-acre wetland mitigation project on a tract in Russell County, Virginia. Funding for this project was approved by the Corps on November 2, 2008. Wetland enhancement activities, via cattle exclusion, will be conducted on approximately 7.9 acres of existing calcareous fen wetlands with an additional 15.2 acres of forested buffer preservation on the adjacent uplands. The proposed wetland mitigation area is wholly contained within an area currently held under a permanent forest management easement by the Conservancy. Additional restrictions will be added to the existing easement to meet mitigation requirements. The wetlands on the property are heavily impacted by cattle grazing and watering. In addition to fencing cattle out of the wetlands and establishing or maintaining a forested buffer, an alternative watering system will be installed along the Rich Mountain ridgeline. This will protect these high elevation wetlands that are currently impacted by cattle grazing and watering needs.

The project area contains approximately 8.0 acres of groundwater-controlled, non-alluvial wetlands that have been identified for potential enhancement. All of these

wetlands are on lands which are currently grazed and impacted by cattle. These wetlands are seep driven and contain species that are indicative of calcareous fens, an identified globally rare habitat. Golden ragwort (*Packera aurea*), swamp lousewort (*Pedicularis lanceolata*), and royal fern (*Osmunda regalis* var. *spectabilis*) have been identified in the wetland enhancement areas.

The Conservancy is negotiating the terms of the restrictions that will be placed on the existing forest management easement. Fencing of the site and installation of the alternate water source are expected to occur in 2010.

TN-7 Upper Clinch River Site

The purpose of this project is to conduct a stream and buffer preservation project on portions of the Clinch River and its tributaries. Due to Confidentiality Agreements, it is not possible to report on the location of the site at this time. The area proposed for preservation encompasses approximately 1,489 acres, and is comprised of four separate parcels. Funding for this project was approved by the Corps on September 28, 2009. Proposed mitigation activities include the preservation of 39,500 linear feet of the Clinch River and high quality streams, including 351 stream-side buffer acres comprised of the first 200 feet of protected streams. The area outside of the 200-foot stream buffers, approximately 1,138 acres, consists of a diverse regenerating mixed mesophytic hardwood forests, and will be reported as “additional protected acreage”.

Long-term protection of the 1,489 acres will occur via a conservation easement to be held by the Conservancy, which will be coordinated closely with a variety of agencies to ensure appropriate enforcement of easement terms. The easement will ultimately limit land division and improvements, provide for protection of 200-foot stream buffers, and require FSC-certified management of the forests on the property.

The project will help sustain water quality, ecosystem processes, habitat, and aquatic species in several key headwater drainages and a critical section of the main-stem Clinch River, and its tributaries, which represent one of the most exceptional and biologically diverse temperate freshwater systems on Earth. In total, the Clinch system contains a highly diverse mussel assemblage of 47 extant species, harboring the greatest number of endangered mussel species in North America. The system supports 18 federally endangered mussels, five federally endangered or threatened fish, over 100 fish species, and several other listed and rare aquatic species, many of which are endemic. A 198-acre portion of the area proposed for preservation is directly adjacent to the Cleveland Barrens State Natural Area, and downstream of the Conservancy’s Cleveland Island Mussell Preserve. Preservation of this particular tract substantially extends a conservation corridor of protected property along the Clinch River.

The Conservancy anticipates finalization and recordation of the conservation easement in 2010. A surface water assessment and evaluation will be completed within 12 months thereafter to confirm mitigation credit.

York River Basin

The York River Basin is comprised of three HUCs (02080105, 02080106, and 02080107) encompassing the headwaters of the Mattaponi, Pamunkey and York rivers draining east into the Bay. This basin is located within both the Conservancy's Piedmont and Chesapeake Bay Lowland ecoregions. Conservation targets include tidal freshwater systems, small Piedmont streams and tributaries, bald cypress forests, anadromous fishes, migratory land birds and raptors, seepage wetlands, Coastal Plain mixed pine-hardwood forest matrix, and calcareous forests.

The projects discussed in this section serve as mitigation for permitted impacts within the York River Basin for which the Fund was used as compensatory mitigation. All approved projects through 2009 are listed on the below tables. Complete project descriptions for projects approved prior to 2009 may be found in earlier reports as indicated below. Updates are given for each project as applicable. Complete descriptions of projects approved during 2009 are provided below.

The following table provides a summary of projects for which funds were approved in the York River Basin. The table includes the project name and corresponding identification number, proposal information (purpose of the request for funding, date the funds were authorized by the Corps), and the amount of funds authorized by the Corps based on resource type. A detailed summary of each project is included in the section below.

Table 53: Approved Project Summary for the York River Basin						
Project ID	Project Name	Purpose of Proposal	Corps Approval Date	Funds Authorized		
				Non-Tidal Wetland Projects ($)	Tidal Wetland Projects ($)	Stream Projects ($)
YK-1	Po River (Leonard)	M	3/28/2003	40,000	0	0
YK-2	Mattaponi River (Gwathmey 1)	M	2/5/2004	50,000	0	0
		M	2/20/2004	909,200	0	0
YK-3	Dragon Run (Beldon)	M	8/5/2004	43,800	0	43,800
CB-8 / YK-4	Upper Crab Neck (BP North America)	M	4/21/2005	7,500	0	0
			2/22/2007	1,068	0	0
YK-5	Cumberland Marsh (Healthvest, Inc.)	F	7/1/2005	12,500	0	12,500
		M	2/22/2007	73,375	1,000	223,125
YK-6	Mattaponi River (Atwood)	A	8/12/2005	45,300	0	30,200
		M	5/2/2006	6,570	0	4,380
YK-7	Mattaponi River (Gwathmey 3)	M	6/22/2006	22,145	0	0
YK-8	Mattaponi River (Bach 1)	A	8/11/2006	6,500	0	0
		M	12/15/2006	192,100	0	33,900
YK-9	Mattaponi River Site	M	12/15/2006	0	0	14,077
YK-10	Mattaponi River (Bach 2)	M	8/10/2007	17,567	0	0
			Totals	**1,427,625**	**1,000**	**361,982**
			Grand Total	**1,790,607**		

M - Mitigation (may include A, AC, C, BS); A - Real Estate Appraisal; AC - Acquisition; C - Conceptual Plan Development; F - Feasibility Study; BS - Boundary Survey

The following tables summarize the status, proposed mitigation activity type and associated acreage, and proposed credit for each non-tidal and tidal wetland project pursued by the Conservancy to serve as mitigation for impacts in the York River Basin. In addition, the tables provide the amount of impact acres in the basin, the total mitigation liability in credits, and a measure of the wetland area that is proposed to be replaced through restoration or creation activities in comparison to the amount impacted. The tables do not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept

plan development.

Table 54: Non-Tidal Wetland Project Summary for the York River Basin										
Project Information		**NT Wetland (Ac)**			**Upland (Ac)**		**Mitigation Acres**	**Proposed Credits**	**Completed**	**Additional Protected Acres (ac)**
Project ID	**Status**	**Rest/Cr**	**Pres**	**Enh**	**Rest**	**Pres**			**Credits**	
YK-1	D,PC		6.1			13.9	20	1.31	N/A	
YK-2	M	67.5	48.57	2.5	33	53.43	205	78.06	N/A	
*YK-3	C		2.11			2.15	4.26	N/A	0.32	34.32
CB-8/ YK-4	PC		67.4			74.8	142.2	10.48	N/A	
*YK-5	P	1.9					1.9	1.90	N/A	
*YK-6	D,PC		36			12	48	4.20	N/A	24
YK-7	C					18	18	N/A	0.90	
YK-10	C							N/A	N/A	128
Sub-totals		**69.40**	**160.18**	**2.5**	**33.00**	**174.28**	**439.36**	**95.95**	**1.22**	**186.32**
Total Acres of Non-Tidal Impacts					**9.07**					
Total Mitigation Liability					**16.41**					
Total Proposed/Completed Credits					**97.17**					
Percent of Wetland Acreage Replacement					**765.2**					

LP - Pending finalization of land protection

P - Planning / permitting

D - Pending delineation / assessment

C - Closed

*Project includes stream or tidal wetland mitigation

I - Restoration/Enhancement/Creation activities in progress

M - Mitigation monitoring

CA - Corrective actions necessary

PC - Pending project closure

Table 55: Tidal Wetland Project Summary for the York River Basin								
Project Information		Tidal Wetland (Ac)			Upland (Ac)		Mitigation Acres	Proposed Credits
Project ID	Status	Rest/Cr	Pres	Enh	Rest	Pres		
*YK-5	P	3.4	0	0	0	0	3.4	3.4
Acre Sub-totals		**3.4**	**0**	**0**	**0**	**0**	**3.4**	**3.4**
Credit Sub-totals		**3.4**	**0**	**0**	**0**	**0**		
Total Acres of Tidal Impacts					**0**			
Total Mitigation Liability					**0**			
Total Proposed Credits					**3.4**			
Percent of Wetland Acreage Replacement					**N/A**			

LP - Pending finalization of land protection	I - Restoration/Enhancement/Creation activities in progress
P - Planning / permitting	M - Mitigation monitoring
D - Pending delineation / assessment	CA - Corrective actions necessary
C - Closed	PC - Pending project closure

*Project includes stream or tidal wetland mitigation

As noted in Section II, the Fund has been used to mitigate for 1,289 linear feet of permitted stream impacts in the York River Basin through 2009. The following table summarizes the status, the protected stream length, and a description of the proposed or completed mitigation activities with the associated channel length for each activity for each stream project pursued by the Conservancy to serve as mitigation for impacts in the York River Basin. The table does not include projects for which funding was approved for initial expenditures such as land appraisals, boundary surveys, feasibility studies, or concept plan development.

Table 56: Stream Project Summary for the York River Basin					
Project ID	**Project Status**	**Stream Mitigation Area (ac)**	**Channel Length in Mitigation Area (lf)**	**Mitigation Activity Description**	**Additional Protected Acreage (ac)**
YK-3*	C	7.42	978	Riparian buffer preservation of 978 lf along the right bank of Dragon Run with an existing mature wooded buffer extending 200 feet from the edge of the protected stream and wetland complex.	Reported under the wetlands summary
YK-5*	P	8	5,800	Dam removal and stream restoration of 2,200 lf of channel and riparian buffer restoration along 3,600 lf along Holt's Creek the Pamunkey River.	0
YK-6*	D,PC	12	4,500	Riparian buffer preservation along 4,500 lf of one bank of the Mattaponi River with existing forested buffer extending 200 feet from the mitigation area.	Reported under the wetlands summary
	Totals	**27.42**	**11,278**		**0**
Total Impacts (lf)		**1,289**			

ac - acre lf - linear feet

LP - Pending finalization of land protection

P - Planning / permitting

D - Pending delineation / assessment

C - Closed

I - Restoration/Enhancement/Creation activities in progress

M - Mitigation monitoring

CA - Corrective actions necessary

PC - Pending project closure

*Project includes wetland mitigation

Additional Protected Acreage refers to acreage included under the protective instrument placed on the property by the program which does not qualify for mitigation due to specified allowable activities (e.g., silviculture, agriculture).

Buffer widths are sufficient to avoid mitigation value conflicts between wetlands and streams ("double-dipping")

The following table summarizes the closed projects within the York River Basin.

Table 57: Closed Project Summary for the York River Basin							
						Stream Activity	
Project ID	**Corps Approval Date**	**Corps Closure Date**	**Amount Approved ($)**	**Amount Unallocated ($)**	**Wetland Credits**	**Buffer Preservation (lf)**	**Livestock Exclusion (lf)**
YK-3	8/5/2004	3/16/2009	87,600	66,065.84	0.32	N/A	N/A
YK-7	6/22/2006	12/21/2009	22,145	2,858.12	0.9	N/A	N/A
YK-8	8/11/06 12/15/06	3/16/2009	232,500	232,500	N/A	N/A	N/A
YK-9	12/15/2006	2/17/2009	14,077	14,077.00	N/A	N/A	N/A
YK-10	8/10/2007	11/29/2009	17,567	54.64	N/A	N/A	N/A
		Totals	**373,889**	**315,555.60**	**1.22**	**0**	**0**

Project Summaries

The following section provides a detailed summary of each project located within the York River Basin for which the Corps has authorized funds through 2009. The summaries include a description of the mitigation activities, partnering opportunities,

long-term protection measures, conservation and ecological benefits, and current status of each project.

YK-1 Po River (Leonard)

The purpose of this project is to conduct a non-tidal wetland and upland buffer preservation project at the Po River property in Spotsylvania County. The funding for this project was approved by the Corps on March 28, 2003. The property was purchased by the Central Virginia Battlefields Trust (CVBT) and placed under easement in February of 2003. The easement is held and monitored by the Virginia Department of Conservation and Recreation (DCR). Long-term protection will be achieved in accordance with the conservation easement. No additional monitoring is required for this project.

Based on a delineation of surface waters and wetlands conducted on the site in December 2006, the property contains approximately 6.1 acres of wetlands and 13.9 acres of forested uplands. The project will be closed in 2010 pending confirmation of the delineation.

YK-2 Mattaponi River (Gwathmey 1)

The purpose of this project is to conduct a non-tidal wetland and upland buffer restoration, wetland enhancement and wetland and upland preservation project at the Gwathmey project in King William County. The initial funding for this project was approved by the Corps on February 5 and 20, 2004. Goals for the project include restoration/creation of 67.5 acres of forested wetlands on approximately 76.9 acres of former agricultural land, which was abandoned in 2004. Restoration efforts began in 2006 and included plugging of field ditches, creation of several seasonally flooded ponds, construction of a berm system, deep ripping of the surface soil, and planting of 44,450 bare root seedlings and 9,600 shrubs. Long-term protection will be achieved in accordance with the conservation easement which is held and monitored annually by the Conservancy.

Monitoring of the site in 2008 found that a majority (11 of 12) of the automated groundwater monitoring wells met the criteria for wetland hydrology, despite the dry conditions observed in 2008. Survival of planted tree species met success criteria (400 stems per acre or greater) in 15 of the 37 sample sites, a slight increase over the 2007 monitoring results (14 of 37). Despite the presence of wetland hydrology shown by the well data, only 10 of 37 plots met the criteria for hydrophytic vegetation.

Monitoring in 2009 indicated that the 12.5% success criteria for wetlands hydrology was met in 7/13 (54%) of the continuous groundwater monitoring wells. Two wells satisfied the 8-12% growing season standard, one well met the 5-8% growing season standard, and two wells failed. Vegetation monitoring in July of 2009 indicated low stem density of woody tree and shrub species following planting in 2007. Stem density ranged from 31 to 971 stems per acre, with an average of 171 stems per acre measured across the site. Only 3/35 (9%) of the monitoring plots showed stem densities that exceeded the 400 stems per acre success criteria. Wetland plants contributed to greater than 50% of the dominant woody vegetation, as measured by relative stem density, in 31/35 (89%) of the monitoring plots, though stem densities for planted woody species ranged from 0 to 431 stems per acre, with an average of 114 planted stems per acre measured. Monitoring of

the herbaceous plant community revealed total plant canopy coverage ranging from 33% to 97%, and averaging 69%, and total aerial coverage exceeded the requirement that areal coverage shall be a minimum of 50% after each monitoring year. Wetland plants contributed to greater than 50% of the dominant herbaceous plant aerial coverage in 1/35 (3%) of the monitoring plots, indicating that a hydrophytic herbaceous community has not become established on the site. However, wetland plants contributed to greater than 50% of the dominant plant community across both the herbaceous and woody strata in 18/35 (51%) of the plots. Precipitation was generally shown to be below average during the early part of the 2009 growing season, which may have contributed to both the lack of wetlands hydrology in four continuous groundwater monitoring wells and apparent development of an upland herbaceous plant community.

Corrective action will occur in 2010 to bring the site into compliance with the forested wetland goal for the site, including replanting of wetland sapling and shrub species in restoration areas where the 400 stems per acre success criterion was not met. This site is on a post construction and mitigation monitoring plan that extends through 2016 with reports submitted to the Corps in 2011, 2013, and 2016.

YK-3 Dragon Run (Beldon)

The purpose of this project is to conduct non-tidal wetland, stream, and the associated upland riparian buffer preservation at the Beldon property in King and Queen County. Funding for this project was approved by the Corps on August 5, 2004. The Conservancy purchased the site on October 4, 2004 and transferred it to a conservation buyer in 2007. Long-term protection of the site will be achieved in accordance with the deed restriction. No additional monitoring is required for this project.

A delineation of surface waters and wetlands on the property was conducted by the Conservancy and confirmed by the Corps in 2006. The property is 46 acres with 11.68 acres in the mitigation area including 2.11 acres of forested bottomland wetland preservation, 978 linear feet of stream preservation, and 9.57 acres of forested upland riparian buffer preservation. The remaining 34.32 acres are considered “additional protected”. The Conservancy requested official closure of this project in 2009. The project was officially closed via a letter from the Army Corps of Engineers dated March 16, 2009. Unspent funds in the amount of $66,073.51 were returned to the general balance of the Fund with $33,036.76 tracked for non-tidal wetlands and $33,036.75 tracked for streams in the York River Basin.

CB-8/YK-4 Upper Crab Neck (BP North America)

The details of this project are included under the Chesapeake Bay River Basin summary.

YK-5 Cumberland Marsh (Healthvest, Inc.)

The purpose of this project is to conduct non-tidal wetland, tidal wetland, and stream restoration at the Cumberland Marsh Preserve in New Kent County. The funding request to complete a feasibility study for the site was approved by the Corps on July 1, 2005. The funding request for restoration costs was approved by the Corps on February 22, 2007. The Conservancy has owned and managed the preserve since December 28, 1993. The preserve is comprised of a mixture of freshwater tidal marsh, open-water

impoundments and wooded upland, and provides habitat for wetlands species and migrating waterfowl, as well as a large population of the federally-endangered sensitive joint vetch (*Aeschynomene virginica*). Long-term protection of the site is achieved through ownership by the Conservancy.

Feasibility studies completed in 2007 confirmed that the dam and impoundment are not structurally stable, and their removal combined with restoration of a natural stream channel and associated wetlands will benefit water quality and habitat. Design and construction plans were completed in 2009. The project involves the selective removal of two earthen embankment dams located on an unnamed tributary to Holts Creek, which in turn drains to the Pamunkey River. Once the lower dam is removed, the former impoundment will be influenced by tide changes. Following removal, all disturbed areas will be stabilized with vegetation, and common native tidal and non-tidal wetland plants will be introduced into the dewatered impoundment area. A new stream channel (approximately 1,730 linear feet above tidal influence) will be allowed to develop naturally, as previously observed in portions of the upper impoundment during periods of pronounced surface water elevation reduction. Active stream restoration will be limited to two in-stream log grade control structures, which will be installed to stabilize the stream channel in the vicinity of the upper dam. Approximately 2.53 acres of palustrine emergent non-tidal wetlands and 2.55 acres of freshwater tidal wetlands are expected to develop within the former impounded areas. Beaver activity will likely further contribute to the development and maintenance of wetlands. Accounting for the expected loss of fringe wetlands surrounding the current impoundment as a result of dewatering, the project will result in the net gain of approximately 2.93 acres of wetlands.

The sensitive joint vetch (*Aeschynomene virginica*) is a federally threatened plant species known to occur in the general project area. There are no known occurrences of this or any other threatened or endangered state or federally protected species at the project site (see attached letter from the US Army Corps dated August 8, 2007). This project will create potential habitat for the sensitive joint vetch, which may colonize the project area from a nearby population.

In addition to the proposed restoration activities at the impoundments, TNC will enhance the wooded riparian buffer along sections of Holt's Creek and the Pamunkey River through the planting of additional hardwoods to extend the existing wooded buffers to 100 feet. Permits acquisition and construction of the dam removal and stream and wetlands restoration project are expected to occur in 2010.

YK-6 Mattaponi River (Atwood)

The purpose of this project is to conduct a real estate appraisal and acquisition of a conservation easement on this approximate 72.50 acre property for a stream and non-tidal wetland preservation project. The site is located near the town of Aylett in King William County, and is bordered by the Mattaponi River. The funding for the appraisal was approved by the Corps on August 12, 2005, with subsequent funding for easement acquisition approved on May 2, 2006. The Conservancy completed negotiations with the landowner and signed the easement at the end of 2009.

Following completion of a delineation to determine mitigation credit, the Conservancy will request closure of this project in 2010.

YK-7 Mattaponi River (Gwathmey 3)
The purpose of this project is to add an additional 10.4 acres of upland preservation to the adjacent site YK-2 Mattaponi River (Gwathmey 1) to assist in reducing land management issues.

The mitigation activities completed through this easement will be accounted for in the 2009 annual report with the project resulting in a total of 0.9 credits to the York River Basin. The project was officially closed via a letter from the Army Corps of Engineers dated December 21, 2009. There was a balance of $2,858.12 remaining in the budget which has been returned to the general balance of the Trust Fund.

YK-8 Mattaponi River (Bach 1)
The purpose of this project is to conduct non-tidal wetland and upland buffer preservation and stream and the associated upland riparian buffer preservation at the Bach property located in Caroline County. The initial funding for this project to complete a real estate appraisal was approved by the Corps on August 11, 2006. A second funding request to complete the acquisition and stewardship activities was approved by the Corps on December 15, 2006. The Conservancy purchased the 175 acre property on December 29, 2006. Due to legal ramifications of this purchase and the subsequent purchase of a conservation easement on additional property owned by Dr. Bach, the purchase of the 175 acres was rescinded by the Circuit Court of Caroline County and fee simple title to the property was returned by the Court to Dr. Bach. The Court further compelled the landowner to return the purchase price to the Fund, which she did.

The project was officially closed via a letter from the Army Corps of Engineers dated March 16, 2009. Unspent funds in the amount of $232,500 were returned to the general balance of the Fund.

YK-9 Mattaponi River Site 2
The purpose of this project is to conduct stream and the associated upland riparian buffer preservation at a site located in King William County. The funding for this project was approved by the Corps on December 15, 2006. The Conservancy was unable to reach agreeable terms with landowner, and closure of the project without mitigation credit was requested in 2009. The project was officially closed via a letter from the Army Corps of Engineers dated February 17, 2009. No funds were spent for this project; therefore, the entire balance of allocated funds ($14,077.00) were returned to the general balance of the Trust Fund and tracked in the York River Basin.

YK-10 Mattaponi River (Bach 2)
The purpose of this project is to extend the additional protected acreage for adjacent wetlands in Caroline County. The conservation easement was completed with the project resulting in a total 128 acres of additional protected lands within the York River Basin. The project was officially closed via a letter from the Army Corps of Engineers dated November 29, 2009. There as $54.64 remaining in the budget, this has been unallocated from this project and returned to the general balance of the Fund.